HITACHI

YS

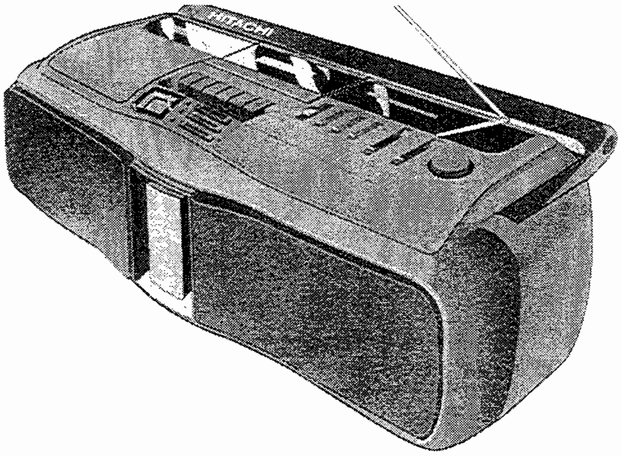
No. 0008E

CX-200

[UC, E, E(BS), W, W(UN), W(AU)]

SERVICE MANUAL

TN-21ZSC-1313



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CAUTION

DANGER

Invisible laser radiation when open and interlocks failed or defeated. AVOID DIRECT EXPOSURE TO BEAM.

GEFAHR

Unsichtbare Laser-Strahlung wenn Interlock (Blockierung) funktionsuntüchtig oder abgeschaltet. UNMITTELBAREN KONTAKT MIT DEM STRAHL UNBEDIGT VERMEIDEN.

DANGER

Faire très attention aux radiations émises par le faisceau laser invisible au défaillance du verrouillage. NE JAMAIS S'EXPOSER DIRECTEMENT AU FAISCEAU.

VARNING

När apparaten öppnats och skyddsanordningen felar eller satts ur funktion förekommer en osynlig laserstrålning. UNDVIK DIREKT BESTRÅLNING.

ADVARSEL

Når apparatet åbnes og beskyttelsesanordningen ikke virker eller sættes un af funktion, forekommer der usynlig laserstråling. UNDGÅ DIREKTE BESTRÅLING.

ADVARSEL

Når denne delen er apen som følge av at låsen er utkoplet eller ikke fungerer, eksisterer det usynlig laserstråling. UNNGÅ Å BLI UTSATT FOR DIREKTE BESTRÅLING!

VARIOITS

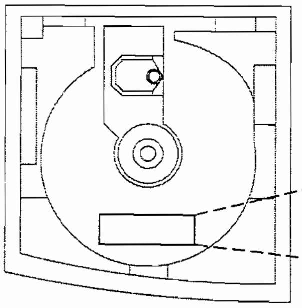
Laite lähettää näkymätöntä lasersäteilyä, kun se avataan ja kun sisäiset turvalukot eivät toimi. VARO JOUTUMASTA ALTTIIKSI SÄTEILYLLE.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT.

CD PLAYER INCORPORATED-
HIGH PERFORMANCE PORTABLE CREATIVE SOUND SYSTEM

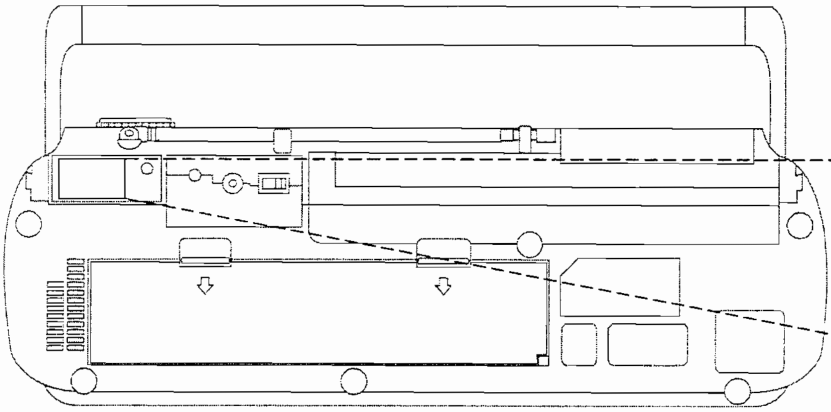
March 1993 HITACHI CONSUMER PRODUCTS (S)

The caution labels on laser usage.



- NEVER TOUCH THE LENS.
- NE JAMAIS TOUCHER L'OBJECTIF.
- DIE LINSE NIEMALS BERÜHREN!
- NO TOQUE NUNCA LA LENTE.

[for UC, E, E(BS), W, W(UN),W(AU)]



[for E, E(BS), W, W(UN),W(AU)]

CLASS 1
LASER PRODUCT

Inside of the set is a laser component emitting a laser radiation over the limit for laser class 1.
In dem Gerät befindet sich eine Laser-Komponente, die eine Laserstrahlung über dem Grenzwert für Laser-Klasse 1 ausstrahlt.
A l'intérieur de l'appareil se trouve un composant à rayonnement laser soumis aux normes de limitation laser de classe 1.
All'interno dell'unità è presente un componente al laser che emette radiazioni al di sopra del limite per i laser di classe 1.
Binnen in dit apparaat bevindt zich een laseronderdeel dat laserstraalen boven de limiet voor laser klasse 1 uitzendt.
Dentro del aparato hay un elemento de láser que emite radiación láser por encima de limite para la clase 1.
Inuti apparaten finns en laserkomponent som avger laserstrålning över gränsen för laser klass 1.
Indeni apparatet findes en laserkomponent, der giver en lasbestråling, der ligger over grænsen for laser klasse 1.
Dentro do aparelho há um componente laser que emite radiação laser superior ao limite para a classe Laser 1.

SAFETY PRECAUTIONS

The following precautions should be observed when servicing.

1. Since many parts in the unit have special safety-related characteristics, always use genuine Hitachi's replacement parts. Especially critical parts in the power circuit block should not be replaced with other makers. Critical parts are marked with ⚠ in the circuit diagram and printed wiring board.
2. Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without danger of electrical shock.

SPECIFICATIONS

• GENERAL SECTION

Power supply:	AC: 120 V, 60 Hz [for UC] AC: 230 V, 50 Hz [for E] AC: 240 V, 50 Hz [for E(BS)] AC: 110 V - 127 V/ 200 V - 220 V/ 230 V - 250 V, 50/60 Hz [for W, W(UN), W(AU)] DC: 9 V ["D" Cell or IEC R20 or SUM 1 x 6 or equivalent] Car battery: 9 V [for W, W(UN), W(AU)]
Power consumption:	20 W
Power output:	10W(2W x 2 + 6W x 1) 10% T.H.D. DC operation
Speakers:	10 cm x 2, 12 cm x 1
Impedance:	4 ohms
Dimensions:	560 (W) x 197.5 (H) x 248.5 (D) mm
Weight:	5.3 kg (with batteries)

• TUNER SECTION

Circuit system:	FM/MW/LW 3 bands [E,E(BS)] FM/SW/MW 3 bands [W, W(UN), W(AU),UC] superheterodyne
Tuning range:	[for UC] FM: 88 - 108 MHz SW: 3.2 - 12.0 MHz MW: 530 - 1,705 kHz [for E, E(BS)] FM: 87.5 - 108 MHz MW: 530 - 1,605 kHz LW: 150 - 285 kHz [for W, W(UN), W(AU)] FM: 88 - 108 MHz SW: 3.2 - 12.0 MHz MW: 530 - 1,605 kHz
Sensitivity:	FM: 8 µV SW: 80 µV/m [for UC, W, W(UN), W(AU)] MW: 1000 µV/m LW: 2500 µV/m [for E, E(BS)]
Antennas:	FM/SW: Telescopic antenna (aerial) MW/LW: Built-in ferrite-core antenna (aerial)

• TAPE DECK SECTION

Tape:	Compact cassette
Track system:	4 tracks stereo
Tape speed:	4.75 cm/s
Recording system and Bias frequency:	AC bias, 85 kHz
Erasing system:	AC erase
Frequency Response:	NORMAL: 70 - 12,000 Hz
Input sensitivity and Impedance:	MIX MIC: 3 mV, 10 Kohms
Load Impedance:	Headphones: 8 to 100 ohms

• CD PLAYER SECTION

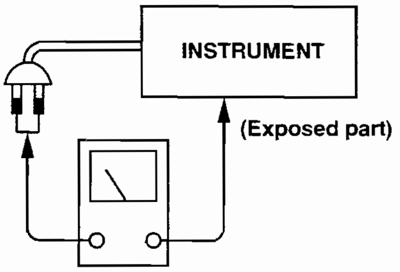
Playing Time:	Approx. 60 minutes/one side
Diameter:	120 mm/80 mm
Sampling Frequency:	44.1 kHz
Quantization Number:	16 bit linear/channel
Frequency Response:	20 - 20,000 Hz

* Specifications are subject to change without notice for performance improvement.

Check that exposed parts are acceptably insulated from the supply circuit before returning the instrument repaired to the customer.

• Checking method

Measure the resistance value between the both poles of attachment cup (Power supply plug) and the exposed parts (Parts such as Knob, Cover, etc. where the customer is easy to touch.) and check that the resistance value is 500 kohms or more.



Insulation tester (DC 500V)

MAINTENANCE

■ Clean cabinet and panels when dirty

Clean off dirt on the surfaces with a dry cloth. Never use thinners, benzene or alcohol since these will damage the surface finish.

DISASSEMBLY

1. **Removing the Front Case**
   Remove the six screws ①. Then, remove the front case a little bit in the arrow direction and disconnect the connector Ⓐ. (Fig. 1,7)

2. **Removing the Top Case**
   After removing front case, pull up the rod antenna, remove the three screws ②, open the cassette lid, and raise the top case to remove. (Fig. 1)

3. **Removing the CD lid**
   Push the CD lid to open it. Release the hook from the CD lid hole using the flat-bladed screwdriver while pressing the CD lid in the direction of the arrow. Release the hook on the other side in the same way. Then, press the hinge in direction A to remove the CD lid. (Fig. 2)

4. **Removing the Cassette lid**
   Open the cassette lid. Press both sides in the direction of the arrow and remove it in direction B. (Fig. 3)

5. **Removing the Handle**
   Raise the handle, disengage the right and left hooks by screwdriver, etc, and while throwing the handle in the arrow C direction, remove it in the arrow D direction. (Fig. 4)

6. **Removing the CD PWB and CD DISPLAY PWB**
   Disconnect the connectors Ⓑ,Ⓒ,Ⓓ,Ⓕ,Ⓖ,Ⓗ and Ⓘ. Remove Unit mecha followed by the four screws ③, two screws ④ and finally remove the CD PWB. (Fig. 5,6,7)

7. **Removing the Cassette Chassis**
   Remove the four screws ⑤ and disconnect connector Ⓔ.(Fig. 5,6)

8. **Removing the M PWB**
   Remove the four screws ⑥. (Fig. 5)

9. **Removing the P PWB**
   Remove the two screws ⑨. (Fig. 7)

10. **Removing the REC Lever**
    Remove the two screws ⑧. (Fig. 8)

11. **Removing the Speakers**
    Remove the front case and then remove the four screws ⑩ from each respective speakers. (Fig. 9)

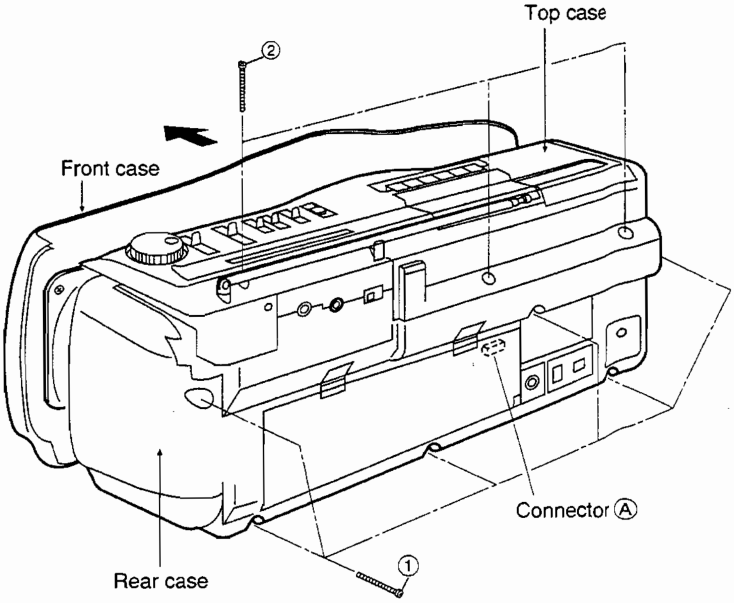


Fig. 1

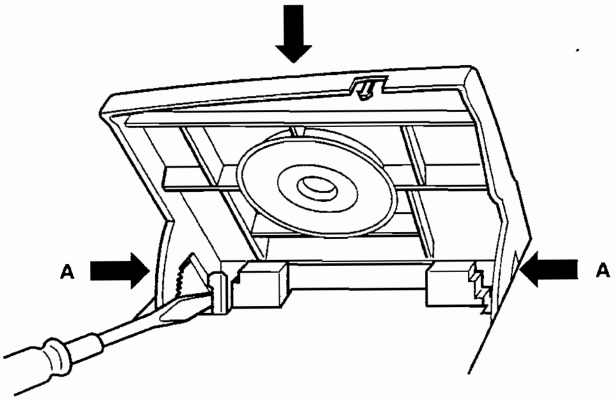


Fig. 2

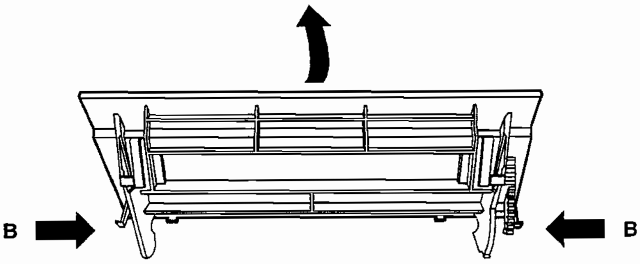


Fig. 3

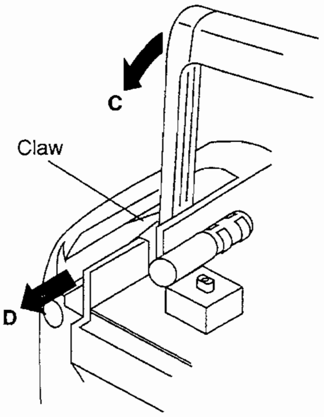


Fig. 4

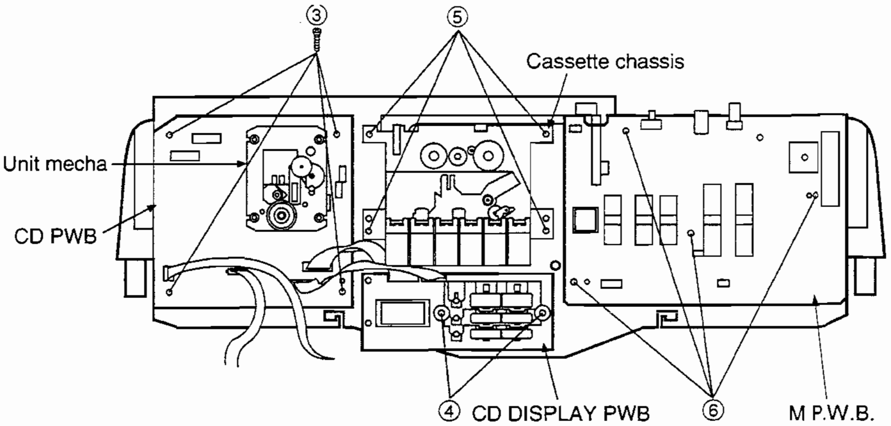

③
⑤
Cassette chassis
Unit mecha
CD PWB
④ CD DISPLAY PWB
⑥
M P.W.B.

Fig. 5

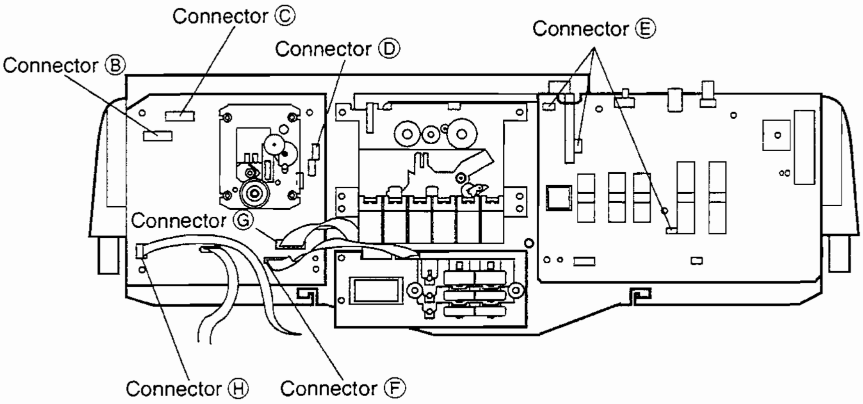

Connector Ⓒ
Connector Ⓓ
Connector Ⓔ
Connector Ⓑ
Connector Ⓖ
Connector Ⓗ
Connector Ⓕ

Fig. 6

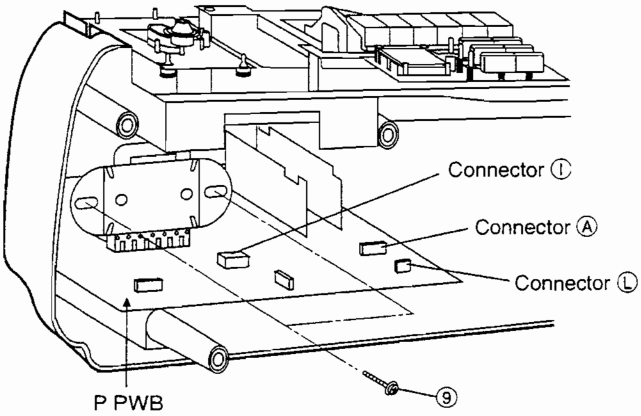

Connector Ⓘ
Connector Ⓐ
Connector Ⓛ
P PWB
⑨

Fig. 7

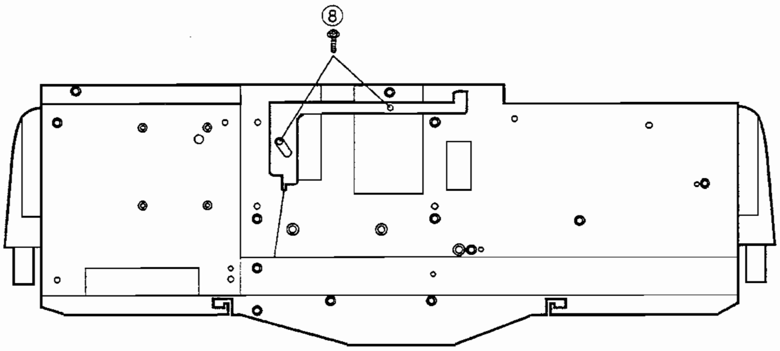


Fig. 8

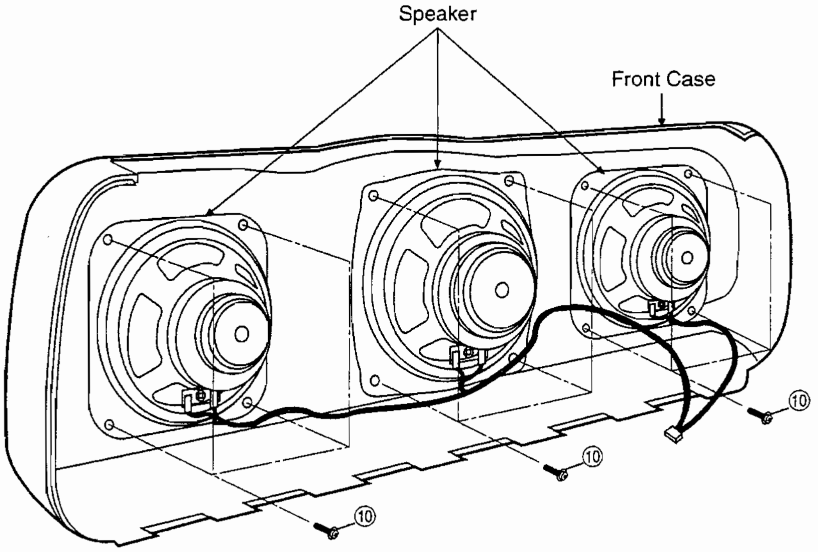
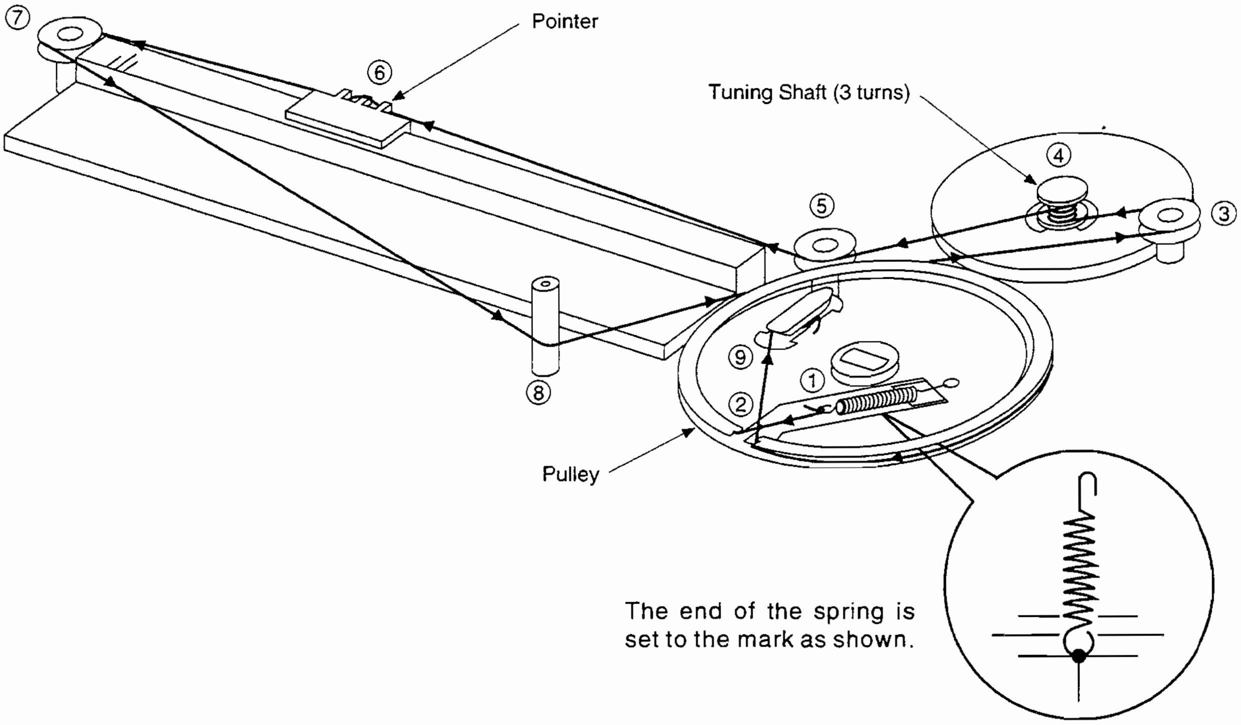

Speaker
Front Case
⑩
⑩
⑩

Fig. 9

DIAL CORD STRINGING

Stringing method

1. Turn the pulley fully anti-clockwise until it stop by the stopper on the dial holder.
2. String the dial cord in the direction of the arrows from (Nos. ①-⑨).
3. Set the dial pointer to setting position.


⑦
Pointer
⑥
Tuning Shaft (3 turns)
④
⑤
③
⑨
①
②
⑧
Pulley

The end of the spring is set to the mark as shown.

LUBRICATION

Apply one or two drops of pan motor oil or sonic slider oil to rotating parts. Coat sliding parts with Molycoat (EL-10M).
Lubricate once a year or evey 1,000 hours of operation.
Do not let oil contact belts or idlers.

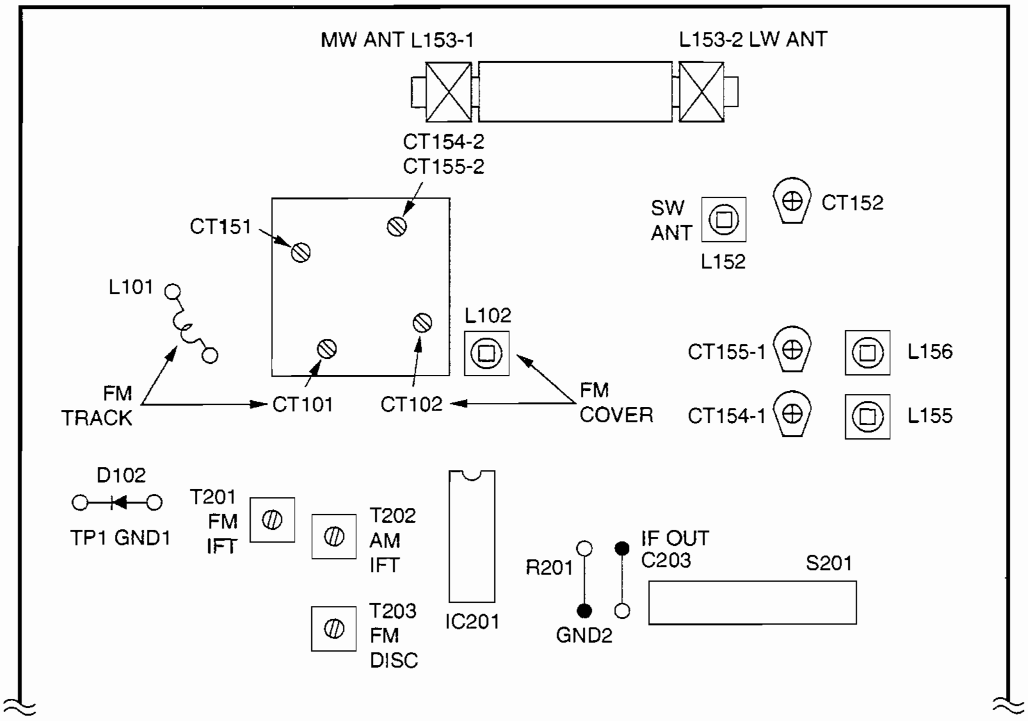
Rotating parts	Metal to metal	Pan motor oil (10W-40)
	Plastics to metal	Sonic slider oil (#1600)
Sliding parts	(Note) Plastics to plastics Plastics to metal	Molycoat (EL-10M)
Spring vibration prevention		Flyol (GB-TS-1)

Note:
When front frame and slide knob are replaced, coat both contacting parts lightly with white grease.

ADJUSTMENTS

1. Radio Section

- **Adjustment points**


MW ANT L153-1
L153-2 LW ANT
CT154-2
CT155-2
CT151
SW ANT
L152
CT152
L101
L102
FM TRACK
CT101
CT102
FM COVER
CT155-1
L156
CT154-1
L155
D102
TP1 GND1
T201 FM IFT
T202 AM IFT
T203 FM DISC
IC201
R201
GND2
IF OUT C203
S201

FM Section

Step		Adjustment Item	Measuring Instrument and Connection: Measuring Instrument	Input Terminal	Output Terminal	Genescope or Signal Generator Frequency	Dial Pointer Position	Adjust	Reading
1	(1)	FM IF	Turn T203 fully counter clockwise			10.7 MHz	Highest	T201	(Note 4)
	(2)	S-Curve	• Genescope (10.7 MHz)	IC201 (Pin 3)	C203			T203	(Note 5)
2	(1)	FM OSC (Covering)	• FM signal generator (400 Hz, 30% dev.) • Oscilloscope • VTVM	TP. 1 (through FM dummy antenna) (Note 3)	C203	87.35 MHz	Lowest	L102	Max.
	(2)					108.35 MHz	Highest	CT102	
	(3)					Repeat steps (1) and (2)			
3	(1)	FM ANT. (Tracking)				90 MHz	90 MHz	L101	Max.
	(2)					106 MHz	106 MHz	CT101	
	(3)					Repeat steps (1) and (2)			
4	(1)	FM MPX (Multiplex)	• Frequency counter	FM antenna (75Ω) 60dB Non modulation	No.11 pin of IC201	98 MHz	98 MHz	RT201	76 kHz ±100 Hz (Note 7)

AM Section

	Step		Adjustment Item	Measuring Instrument and Connection			Genescope or Signal Generator Frequency	Dial Pointer Position	Adjust	Reading
				Measuring Instrument	Input Terminal	Output Terminal				
For UC, W, W(UN), W(AU)	1	(1)	AM IF	• Genescope (455 kHz)	Ferrite-core antenna (Note 2)	C203	455 kHz	Highest	T202	Note 1
		(2)					Repeat steps (1)			
	2	(1)	MW OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.) • VTVM • Oscilloscope	Ferrite-core antenna (Note 2)	C203	515 kHz	Lowest	L156	Max.
		(2)					1,650 kHz *1,750 kHz	Highest	CT155-2	
		(3)					Repeat steps (1) and (2)			
	3	(1)	MW ANT. (Tracking)				600 kHz	600 kHz	L153-1	Max.
		(2)					1,400 kHz	1,400 kHz	CT151	
		(3)					Repeat steps (1) and (2)			
	4	(1)	SW OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.) • VTVM • Oscilloscope	TP 1 (through SW dummy antenna (Note 6)	C203	3.1 MHz	Lowest	L155	Max.
		(2)					12.5 MHz	Highest	CT154-1	
		(3)					Repeat steps (1) and (2)			
	5	(1)	SW ANT. (Tracking)				4 MHz	4 MHz	L152	Max.
		(2)					11 MHz	11 MHz	–	
		(3)					Repeat steps (1) and (2)			
For E, E(BS)	1	(1)	AM IF	• Genescope (465 kHz)	Ferrite-core antenna (Note 2)	C203	465 kHz	Highest	T202	Note 1
		(2)					Repeat steps (1)			
	2	(1)	MW OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.) • VTVM • Oscilloscope	Ferrite-core antenna (Note 2)	C203	515 kHz	Lowest	L155	Max.
		(2)					1,650 kHz	Highest	CT154-2	
		(3)					Repeat steps (1) and (2)			
	3	(1)	MW ANT. (Tracking)				600 kHz	600 kHz	L153-1	Max.
		(2)					1,400 kHz	1,400 kHz	CT151	
		(3)					Repeat steps (1) and (2)			
	4	(1)	LW OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.) • VTVM • Oscilloscope	Ferrite-core antenna (Note 2)	C203	145 kHz	Lowest	L156	Max.
		(2)					290 kHz	Highest	CT155-1	
		(3)					Repeat steps (1) and (2)			
	5	(1)	LW ANT. (Tracking)				160 kHz	160 kHz	L153-2	Max.
		(2)					270 kHz	270 kHz	CT152	
		(3)					Repeat steps (1) and (2)			

(* FOR UC)

Note

1. Feed in a weak signal from the genescope. Adjust T202 for maximum gain and the waveform of Fig. 10.

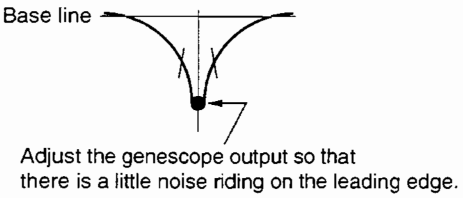
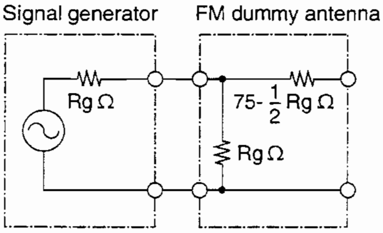

Base line
Adjust the genescope output so that
there is a little noise riding on the leading edge.

Fig. 10

2. Connect AM signal generator to the loop antenna, bring near to the ferrite-core antenna.
3. FM dummy antenna is shown in Fig. 11.


Signal generator
FM dummy antenna
Rg Ω
75- 1/2 Rg Ω
Rg Ω

Rg: SG's output impedance

Fig. 11

4. Feed in a weak signal to IC201. pin 3 from the genescope. Adjust T201 for maximum gain and the waveform of indicated in Fig. 12. If the center of the waveform cannot be lined up on the marker, adjust the right/left balance.

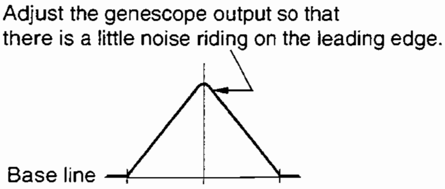

Adjust the genescope output so that
there is a little noise riding on the leading edge.
Base line

Fig. 12

5. Use the T203 core to form the S-curve shown in Fig. 13. Adjust the symmetry of A and B about point C for linearity.

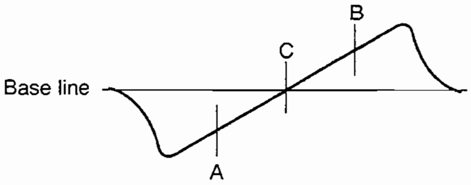
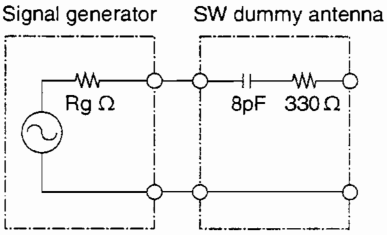

B
C
Base line
A

Fig. 13

6. SW dummy antenna is shown in Fig. 14.


Signal generator
SW dummy antenna
Rg Ω
8pF
330 Ω

Rg: SG's output impedance

Fig. 14

7. Connect the frequency counter to the No. 11 pin of IC201 and connect a 220 kΩ resistor parallel with the frequency counter in Fig. 15.

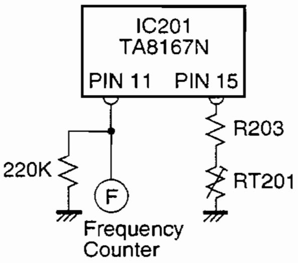

IC201
TA8167N
PIN 11
PIN 15
R203
220K
F
RT201
Frequency
Counter

Fig. 15

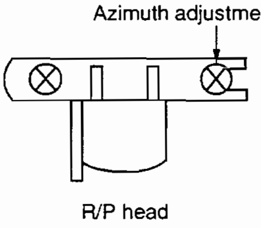
2. Tape Recorder Section

Perform the following adjustments in the sequence stated after cleaning the head, pressure roller, and capstan with a head cleaning stick moistened in alcohol.

Step	Adjustment Item	Measuring Instrument and Connection			Check Tape	Mode	Adjusted Position	Adjusted Value	Remarks
		Measuring Instrument	Input Terminal	Output Terminal					
1	Tape speed	• Frequency counter	Tape Playback	Speaker terminal (4Ω load)	Tape speed adjustment tape (3 kHz)	Playback	Reverse side of deck motor Fig. 16	3 kHz ±30 Hz	Note 1
2	Head azimuth	• VTVM	Tape Playback	Speaker terminal (4Ω load)	Head azimuth adjustment tape (10 kHz)	Playback	Azimuth adjusting screw	Output max.	Note 2

Note

1. Adjust within 30 seconds after heat-running for more than 20 minutes.
2. Allowance should be within -3dB from maximum value.



Difference between L and R	≦3dB

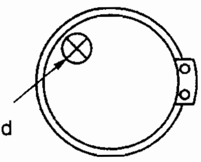

Insert the screw driver in this part of motor and adjust the tape speed.

Fig. 16

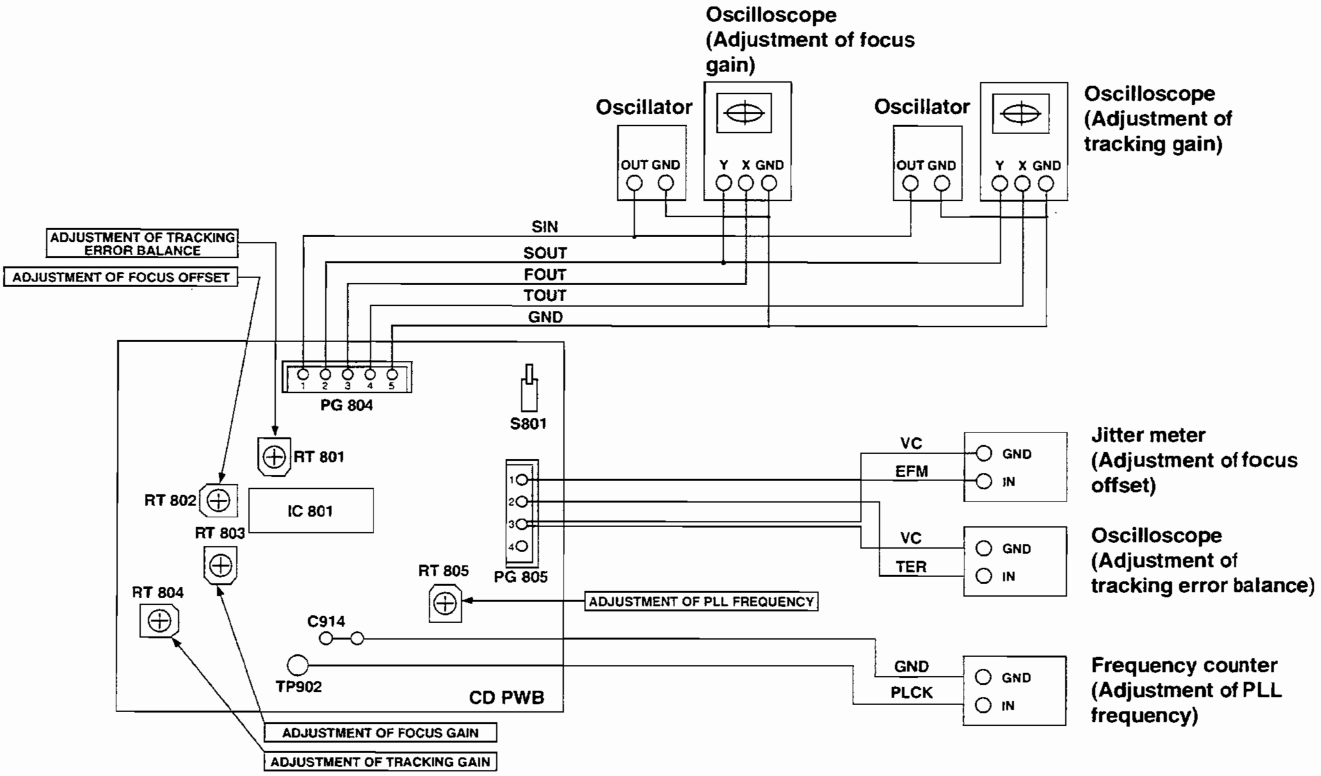
INSPECTION OF MECHANISM

No.	Inspection item	Reference value	Remarks
1	Playback torque	30 to 60 g·cm	
2	FF/REW torque	55 to 140 g·cm	
3	Supply back-tension	1.0 to 5.0 g·cm	
4	Tape drive force	Over 80 g	

3. CD Player Section

Invisible laser radiation from object lens of pickup, while S801 is turned on. Avoid direct exposure to beam.

• Adjustment points


Oscilloscope (Adjustment of focus gain)
Oscillator
OUT GND
Y X GND
Oscillator
OUT GND
Oscilloscope (Adjustment of tracking gain)
Y X GND
ADJUSTMENT OF TRACKING ERROR BALANCE
ADJUSTMENT OF FOCUS OFFSET
SIN
SOUT
FOUT
TOUT
GND
PG 804
S801
RT 801
RT 802
IC 801
RT 803
RT 804
RT 805
PG 805
C914
TP902
CD PWB
VC
EFM
GND
IN
Jitter meter (Adjustment of focus offset)
VC
TER
GND
IN
Oscilloscope (Adjustment of tracking error balance)
ADJUSTMENT OF PLL FREQUENCY
GND
PLCK
GND
IN
Frequency counter (Adjustment of PLL frequency)
ADJUSTMENT OF FOCUS GAIN
ADJUSTMENT OF TRACKING GAIN

Adjustment should be made in the following sequence.

3-1. Adjustment of PLL frequency

1. Instrument to be used
- Frequency counter

2. Adjustment procedure
   - [1] Turn the power on and set the CD section in STOP mode.
   - [2] Adjusting RT 805 so that the indication of the frequency counter should be within the limit of 4.4 MHz ± 0.05 (E/EBS/UC) or 4.5 MHz ± 0.5 (W/WUN/WAU).
   - [3] Load a disc, set the S801 ON and CD section in PLAY mode, then confirm the counter frequency to be 4.32 MHz.
   - [4] After adjustment, disconnect the frequency counter.

3-2. Adjustment of focus offset

1. Instrument to be used
- Oscilloscope
- Test disk of PTD9002
- Jitter meter 6135

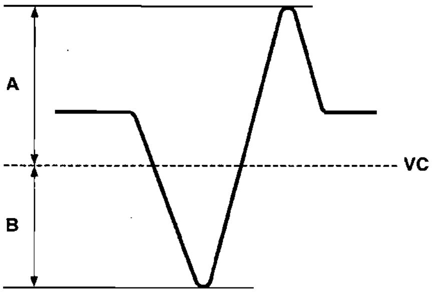
2. Adjustment procedure
   - [1] Set the disk on the turn table and turn the power on.
   - [2] Set the S801 on, that is CD door is closed.
   - [3] Reproduce track No. 3.
   - [4] Adjust RT 802 till the jitter reading is minimum.

3-3. Adjustment of tracking error balance

1. Instrument to be used

- Oscilloscope
- Test disk of PTD9002

2. Adjustment procedure
   [1] Turn the power on, and set the disk on the turn table.
   [2] Set the S801 on, that is CD door is closed.
   [3] Set the CD section to be in PAUSE condition at the lead of track No. 1.
   [4] Observe oscilloscope waveform and adjust RT 801 so that the ratio of A:B which are shown on the following figure is within 1 ± 0.1.

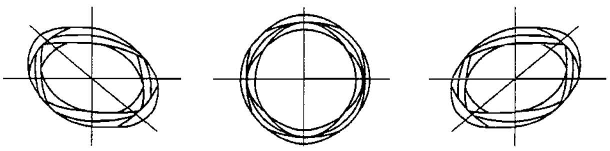


3-4. Adjustment of focus gain

1. Instrument to be used

- Oscilloscope
- Oscillator
- Test disk of PT9002

2. Adjustment procedure
   [1] Connect the audio oscillator to pin 1 of PG 804 and apply 1000 Hz 100 mVrms.
   [2] Set the disk on the turn table and turn the power on.
   [3] Set the S801 on, that is CD door is closed.
   [4] Reproduce track No. 3.
   [5] Adjust RT 803, so that X-Y display (Lissajou's display) becomes symmetrical in respect to both X-Y axis.



Note:

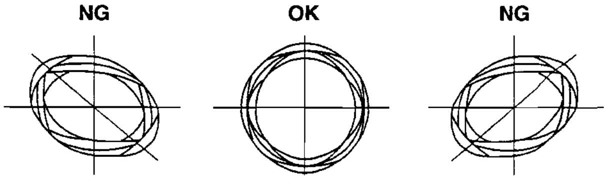
1. It is necessary to use frequency counter to confirm the audio oscillator frequency before starting the production daily.
2. Use 10 to 1 probe for oscilloscope input for all CD adjustment.
3. After [5] adjustment, if the Lissajou's figure is very noisy, turn back RT 803 a bit till it is not noisy.

3-5. Adjustment of tracking gain

1. Instrument to be used

- Oscilloscope
- Oscillator
- Test disk of PT9002

2. Adjustment procedure
   [1] Connect the audio oscillator to pin 1 of PG 804 and apply 800 Hz 60 mVrms.
   [2] Set the disk on the turn table and turn the power on.
   [3] Set the S801 on, that is CD door is closed.
   [4] Reproduce track No. 3.
   [5] Adjust RT 804, so that X-Y display (Lissajou's display) becomes symmetrical in respect to both X-Y axis.

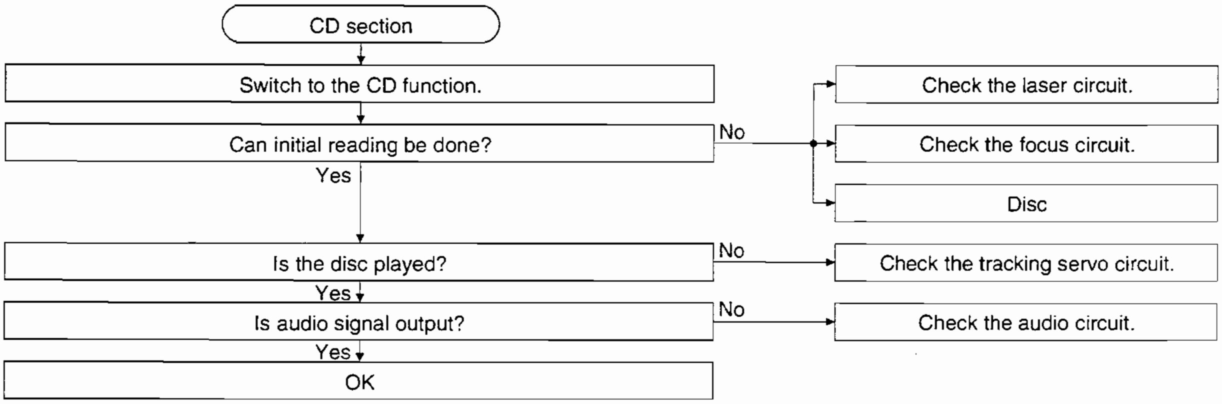


Note:

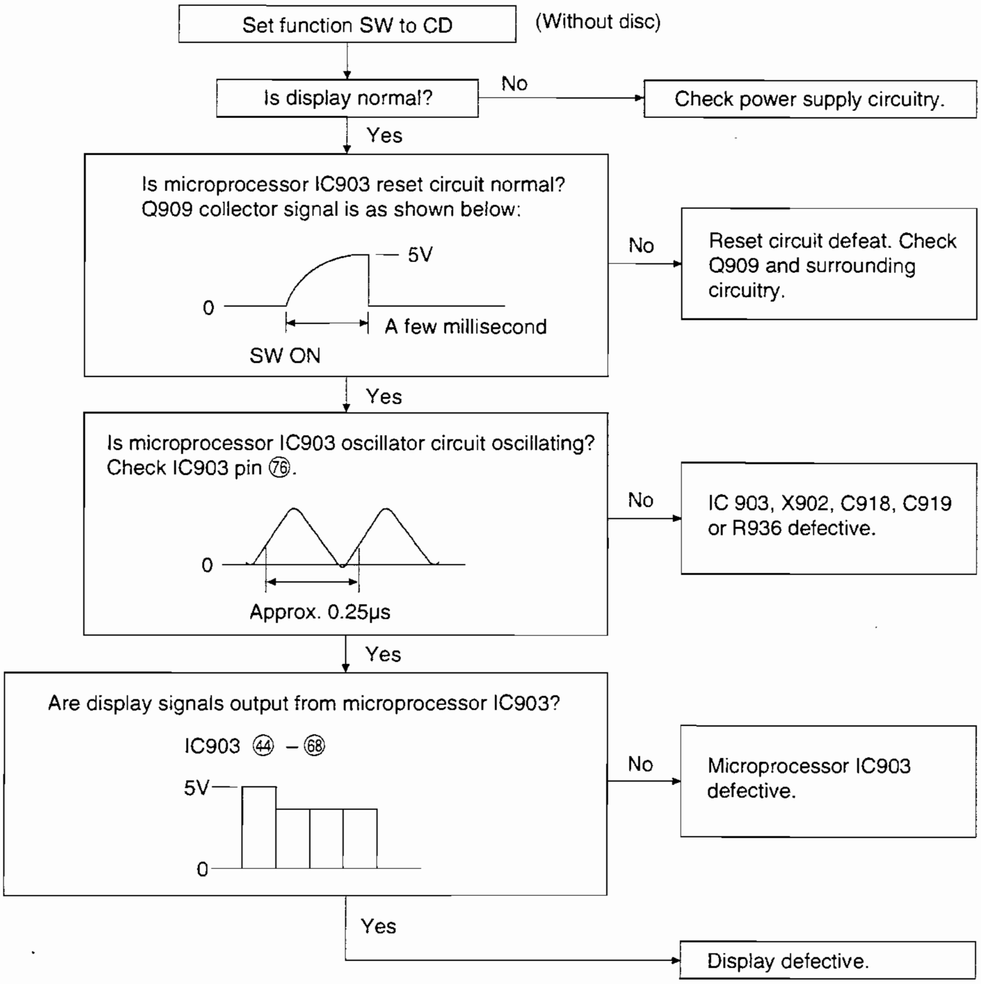
1. It is necessary to use frequency counter to confirm the audio oscillator frequency before starting the production daily.
2. Use 10 to 1 probe for oscilloscope input for all CD adjustment.

TROUBLESHOOTING

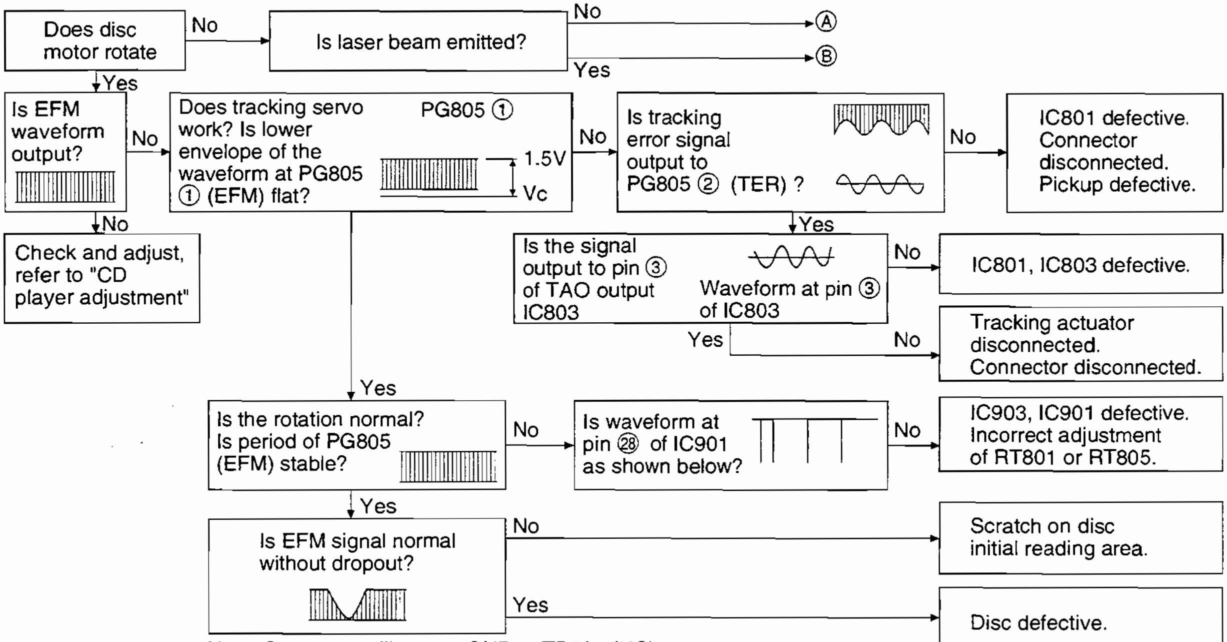
- **CD Section**


CD section
Switch to the CD function.
Can initial reading be done?
No
Check the laser circuit.
Check the focus circuit.
Disc
Yes
Is the disc played?
No
Check the tracking servo circuit.
Yes
Is audio signal output?
No
Check the audio circuit.
Yes
OK

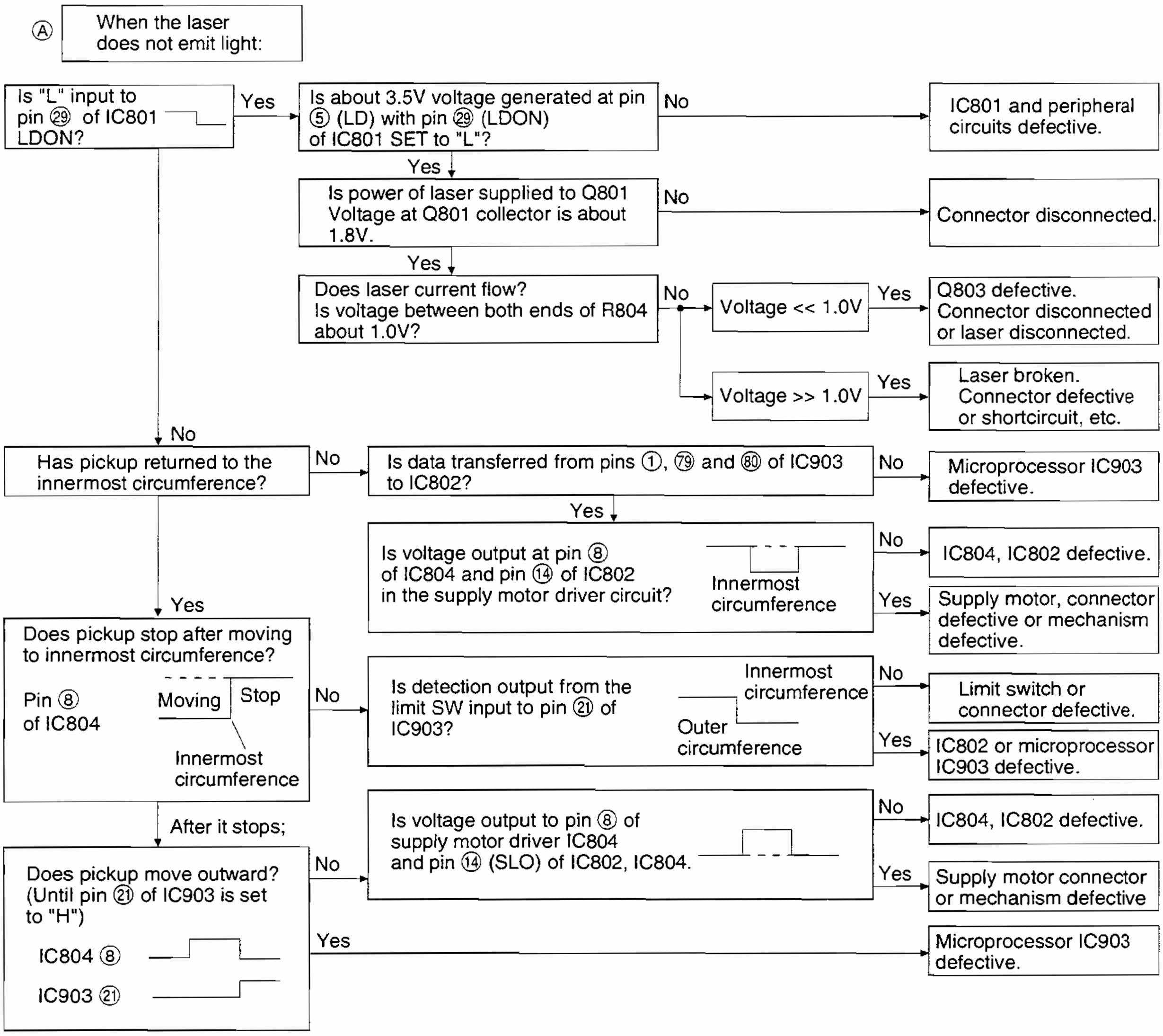
(1) If display lighting is not normal. (The following can be checked without loading disc.)

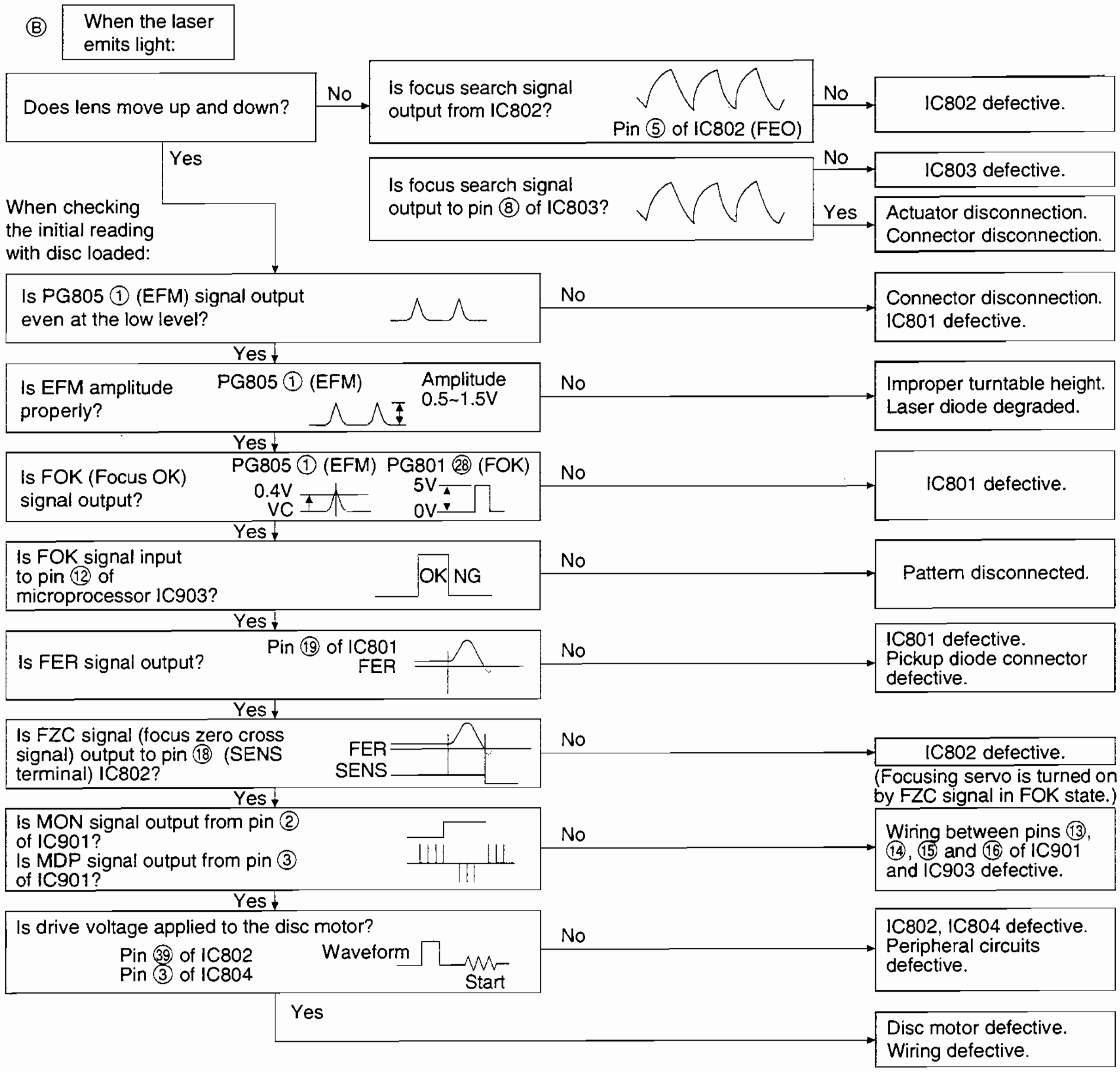

Set function SW to CD
(Without disc)
Is display normal?
No
Check power supply circuitry.
Yes
Is microprocessor IC903 reset circuit normal?
Q909 collector signal is as shown below:
5V
0
A few millisecond
SW ON
No
Reset circuit defeat. Check Q909 and surrounding circuitry.
Yes
Is microprocessor IC903 oscillator circuit oscillating?
Check IC903 pin (76).
0
Approx. 0.25µs
No
IC 903, X902, C918, C919 or R936 defective.
Yes
Are display signals output from microprocessor IC903?
IC903 ㊹ – (68)
5V
0
No
Microprocessor IC903 defective.
Yes
Display defective.

(2) When the initial reading cannot be done:

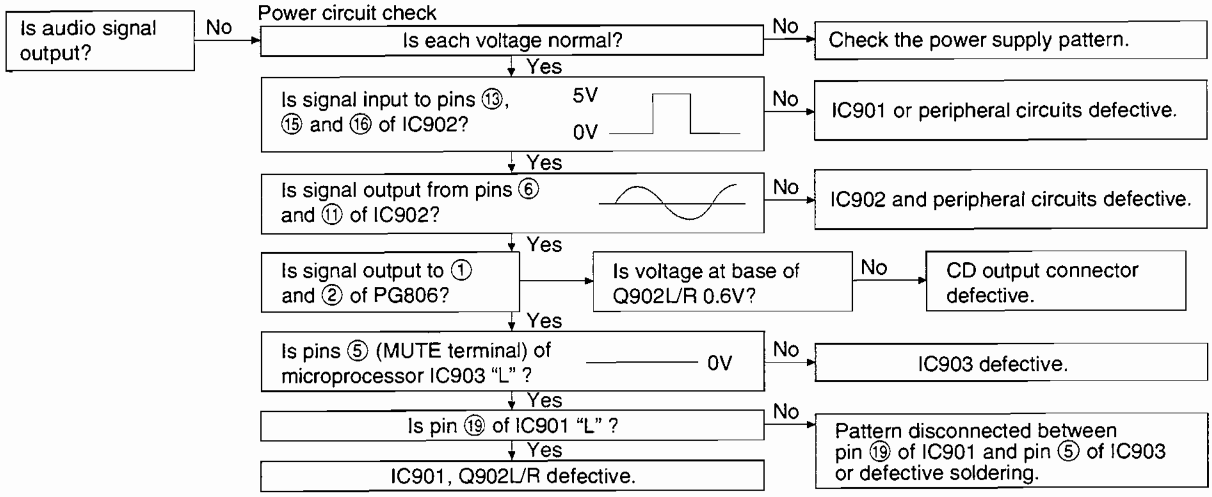

Does disc motor rotate
No
Is laser beam emitted?
No
Ⓐ
Yes
Ⓑ
Yes
Is EFM waveform output?
No
Does tracking servo work? Is lower envelope of the waveform at PG805 ① (EFM) flat?
PG805 ①
1.5V
Vc
No
Is tracking error signal output to PG805 ② (TER) ?
No
IC801 defective. Connector disconnected. Pickup defective.
No
Check and adjust, refer to "CD player adjustment"
Yes
Is the signal output to pin ③ of TAO output IC803
Waveform at pin ③ of IC803
No
IC801, IC803 defective.
Yes
No
Tracking actuator disconnected. Connector disconnected.
Yes
Is the rotation normal? Is period of PG805 (EFM) stable?
No
Is waveform at pin ㉘ of IC901 as shown below?
No
IC903, IC901 defective. Incorrect adjustment of RT801 or RT805.
Yes
Is EFM signal normal without dropout?
No
Scratch on disc initial reading area.
Yes
Disc defective.

Note: Connect oscilloscope GND to TP901 (UC).

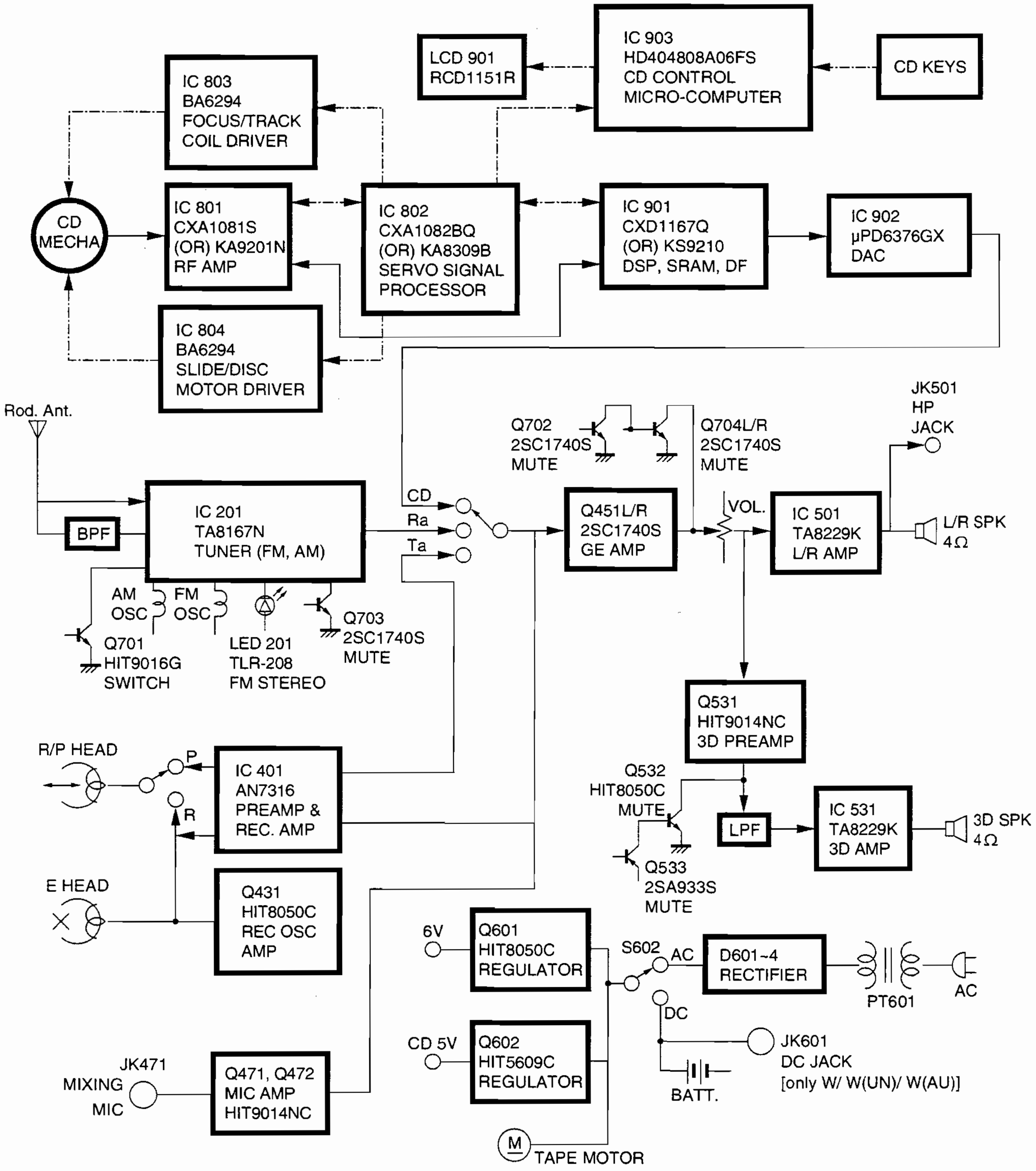

Ⓐ
When the laser does not emit light:
Is "L" input to pin ㉙ of IC801 LDON?
Yes
Is about 3.5V voltage generated at pin ⑤ (LD) with pin ㉙ (LDON) of IC801 SET to "L"?
No
IC801 and peripheral circuits defective.
Yes
Is power of laser supplied to Q801 Voltage at Q801 collector is about 1.8V.
No
Connector disconnected.
Yes
Does laser current flow? Is voltage between both ends of R804 about 1.0V?
No
Voltage << 1.0V
Yes
Q803 defective. Connector disconnected or laser disconnected.
Voltage >> 1.0V
Yes
Laser broken. Connector defective or shortcircuit, etc.
No
Has pickup returned to the innermost circumference?
No
Is data transferred from pins ①, ㊾ and ㊿ of IC903 to IC802?
No
Microprocessor IC903 defective.
Yes
Is voltage output at pin ⑧ of IC804 and pin ⑭ of IC802 in the supply motor driver circuit?
Innermost circumference
No
IC804, IC802 defective.
Yes
Supply motor, connector defective or mechanism defective.
Yes
Does pickup stop after moving to innermost circumference?
Pin ⑧ of IC804
Moving
Stop
Innermost circumference
No
Is detection output from the limit SW input to pin ㉑ of IC903?
Innermost circumference
Outer circumference
No
Limit switch or connector defective.
Yes
IC802 or microprocessor IC903 defective.
After it stops;
Does pickup move outward? (Until pin ㉑ of IC903 is set to "H")
IC804 ⑧
IC903 ㉑
No
Is voltage output to pin ⑧ of supply motor driver IC804 and pin ⑭ (SLO) of IC802, IC804.
No
IC804, IC802 defective.
Yes
Supply motor connector or mechanism defective
Yes
Microprocessor IC903 defective.


Ⓑ
When the laser emits light:
Does lens move up and down?
No
Is focus search signal output from IC802?
Pin ⑤ of IC802 (FEO)
No
IC802 defective.
Is focus search signal output to pin ⑧ of IC803?
No
IC803 defective.
Yes
Actuator disconnection. Connector disconnection.
Yes
When checking the initial reading with disc loaded:
Is PG805 ① (EFM) signal output even at the low level?
No
Connector disconnection. IC801 defective.
Yes
Is EFM amplitude properly?
PG805 ① (EFM)
Amplitude 0.5~1.5V
No
Improper turntable height. Laser diode degraded.
Yes
Is FOK (Focus OK) signal output?
PG805 ① (EFM)
PG801 ㉘ (FOK)
0.4V
VC
5V
0V
No
IC801 defective.
Yes
Is FOK signal input to pin ⑫ of microprocessor IC903?
OK
NG
No
Pattern disconnected.
Yes
Is FER signal output?
Pin ⑲ of IC801
FER
No
IC801 defective. Pickup diode connector defective.
Yes
Is FZC signal (focus zero cross signal) output to pin ⑱ (SENS terminal) IC802?
FER
SENS
No
IC802 defective.
(Focusing servo is turned on by FZC signal in FOK state.)
Yes
Is MON signal output from pin ② of IC901?
Is MDP signal output from pin ③ of IC901?
No
Wiring between pins ⑬, ⑭, ⑮ and ⑯ of IC901 and IC903 defective.
Yes
Is drive voltage applied to the disc motor?
Pin ㊴ of IC802
Pin ③ of IC804
Waveform
Start
No
IC802, IC804 defective. Peripheral circuits defective.
Yes
Disc motor defective. Wiring defective.

• Audio Section

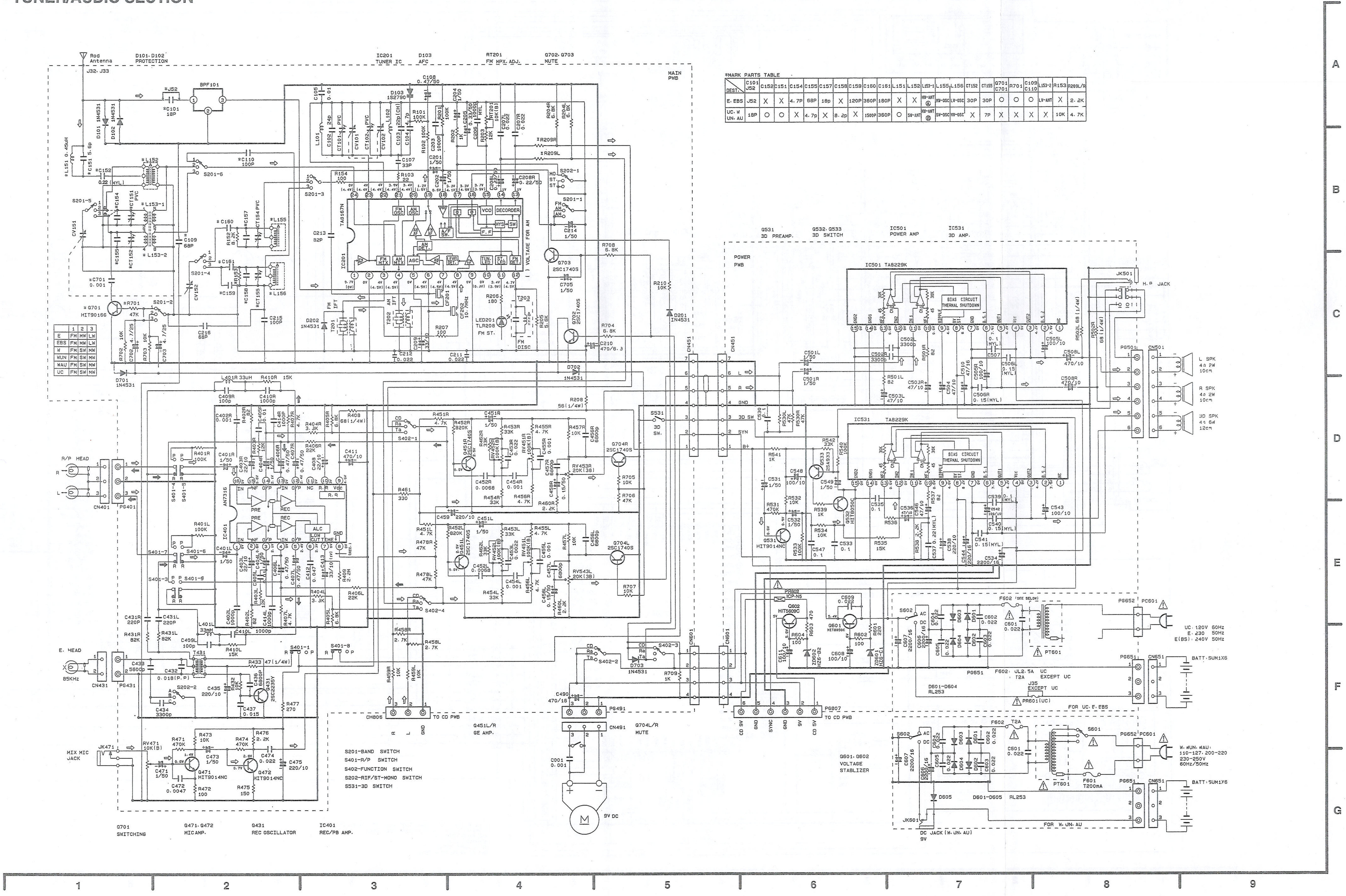

Is audio signal output?
No
Power circuit check
Is each voltage normal?
No
Check the power supply pattern.
Yes
Is signal input to pins ⑬, ⑮ and ⑯ of IC902?
5V
0V
No
IC901 or peripheral circuits defective.
Yes
Is signal output from pins ⑥ and ⑪ of IC902?
No
IC902 and peripheral circuits defective.
Yes
Is signal output to ① and ② of PG806?
Is voltage at base of Q902L/R 0.6V?
No
CD output connector defective.
Yes
Is pins ⑤ (MUTE terminal) of microprocessor IC903 "L" ?
0V
No
IC903 defective.
Yes
Is pin ⑲ of IC901 "L" ?
No
Pattern disconnected between pin ⑲ of IC901 and pin ⑤ of IC903 or defective soldering.
Yes
IC901, Q902L/R defective.

BLOCK DIAGRAM


IC 803
BA6294
FOCUS/TRACK
COIL DRIVER
LCD 901
RCD1151R
IC 903
HD404808A06FS
CD CONTROL
MICRO-COMPUTER
CD KEYS
CD
MECHA
IC 801
CXA1081S
(OR) KA9201N
RF AMP
IC 802
CXA1082BQ
(OR) KA8309B
SERVO SIGNAL
PROCESSOR
IC 901
CXD1167Q
(OR) KS9210
DSP, SRAM, DF
IC 902
μPD6376GX
DAC
IC 804
BA6294
SLIDE/DISC
MOTOR DRIVER
Rod. Ant.
Q702
2SC1740S
MUTE
Q704L/R
2SC1740S
MUTE
JK501
HP
JACK
IC 201
TA8167N
TUNER (FM, AM)
BPF
CD
Ra
Ta
Q451L/R
2SC1740S
GE AMP
VOL.
IC 501
TA8229K
L/R AMP
L/R SPK
4Ω
AM
OSC
FM
OSC
Q701
HIT9016G
SWITCH
LED 201
TLR-208
FM STEREO
Q703
2SC1740S
MUTE
Q531
HIT9014NC
3D PREAMP
R/P HEAD
P
R
IC 401
AN7316
PREAMP &
REC. AMP
Q532
HIT8050C
MUTE
LPF
IC 531
TA8229K
3D AMP
3D SPK
4Ω
Q533
2SA933S
MUTE
E HEAD
Q431
HIT8050C
REC OSC
AMP
6V
Q601
HIT8050C
REGULATOR
S602
AC
DC
D601~4
RECTIFIER
PT601
AC
CD 5V
Q602
HIT5609C
REGULATOR
JK601
DC JACK
[only W/ W(UN)/ W(AU)]
BATT.
JK471
MIXING
MIC
Q471, Q472
MIC AMP
HIT9014NC
M
TAPE MOTOR

CIRCUIT DIAGRAM

• TUNER/AUDIO SECTION


Rod Antenna
J32, J33
D101, D102 PROTECTION
IC201 TUNER IC
D103 AFC
RT201 FM MPX. ADJ.
Q702, Q703 MUTE
MAIN PWB
BPF101
TA8167N
Q531 3D PREAMP.
Q532, Q533 3D SWITCH
IC501 POWER AMP
IC531 3D AMP.
POWER PWB
IC501 TA8229K
IC531 TA8229K
BIAS CIRCUIT THERMAL SHUTDOWN
H.P JACK
L SPK 4Ω 2W 10cm
R SPK 4Ω 2W 10cm
3D SPK 4Ω 6W 12cm
R/P HEAD
E. HEAD
85KHz
AN7316
IC401
MIX MIC JACK
Q701 SWITCHING
Q471, Q472 MIC AMP.
Q431 REC OSCILLATOR
IC401 REC/PB AMP.
S201-BAND SWITCH
S401-R/P SWITCH
S402-FUNCTION SWITCH
S202-RIF/ST-MONO SWITCH
S531-3D SWITCH
TO CD PWB
Q451L/R GE AMP.
Q704L/R MUTE
M
9V DC
Q601, Q602 VOLTAGE STABLIZER
UC: 120V 60Hz
E: 230 50Hz
E(BS): 240V 50Hz
BATT: SUM1X6
F602: UL2.5A UC
T2A EXCEPT UC
J35 EXCEPT UC
PR601(UC)
D601-D604 RL253
FOR UC, E, EBS
W, WUN, WAU: 110-127, 200-220 230-250V 60Hz/50Hz
F601 T200mA
D601-D605 RL253
FOR W, UN, AU
DC JACK (W, UN, AU) 9V
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9

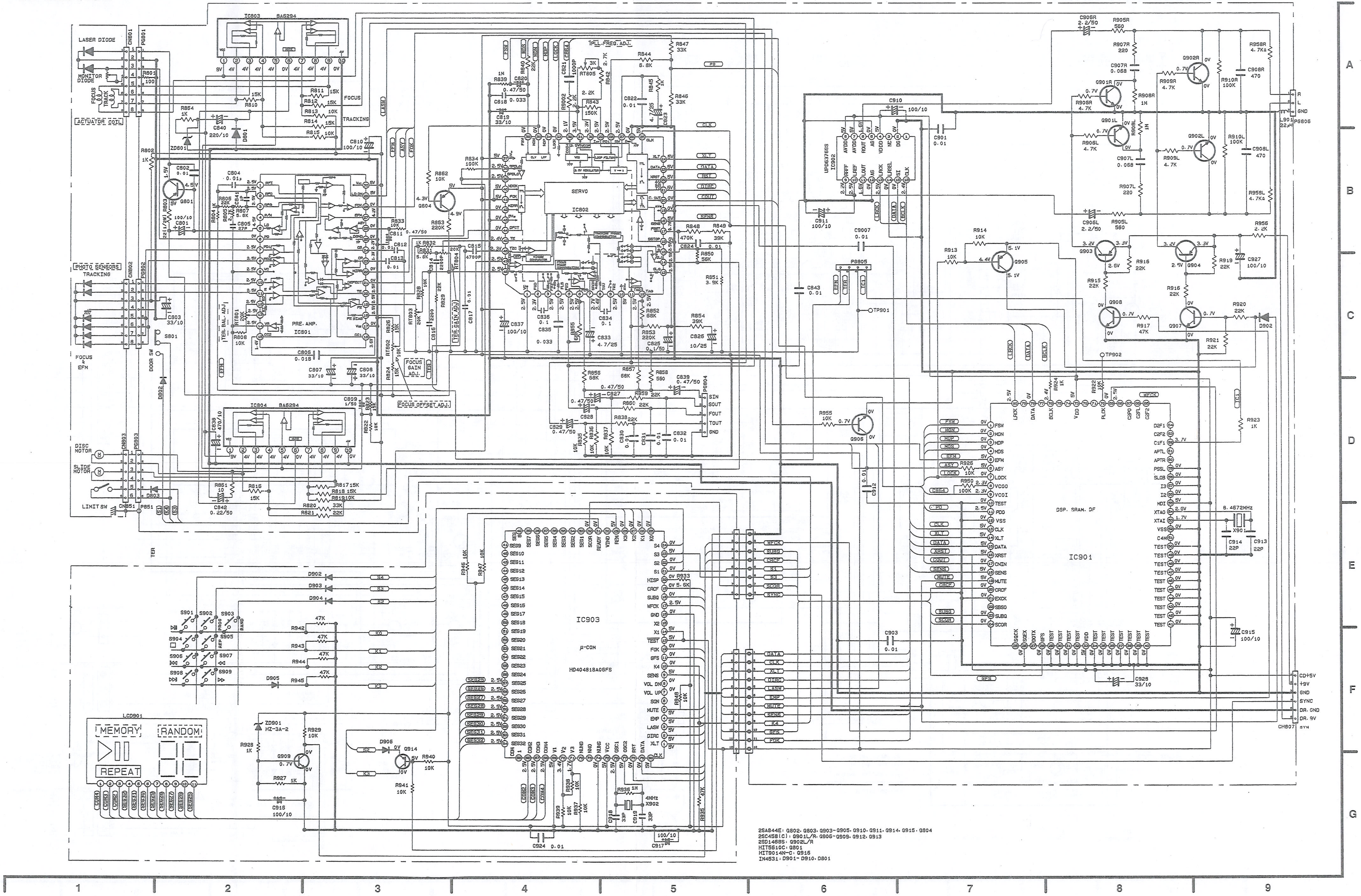
*MARK PARTS TABLE

DEST.	C101 J52	C152	C151	C154	C155	C157	C158	C159	C160	C161	L151	L152	L153-1	L155	L156	CT152	CT155	Q701 C701	R701	C109 C110	L153-2	R153	R209L/R
E, EBS	J52	X	X	4.7P	68P	18p	X	120P	360P	180P	X	X	MW-ANT Ⓐ	MW-OSC	LW-OSC	30P	30P	○	○	○	LW-ANT	X	2.2K
UC, W UN, AU	18P	○	○	X	4.7p	X	8.2p	X	1500P	360P	○	SW-ANT	MW-ANT Ⓑ	SW-OSC	MW-OSC	X	7P	X	X	X	X	10K	4.7K

	1	2	3
E	FM	MW	LW
EBS	FM	MW	LW
W	FM	SW	MW
WUN	FM	SW	MW
WAU	FM	SW	MW
UC	FM	SW	MW

CIRCUIT DIAGRAM

• CD SECTION

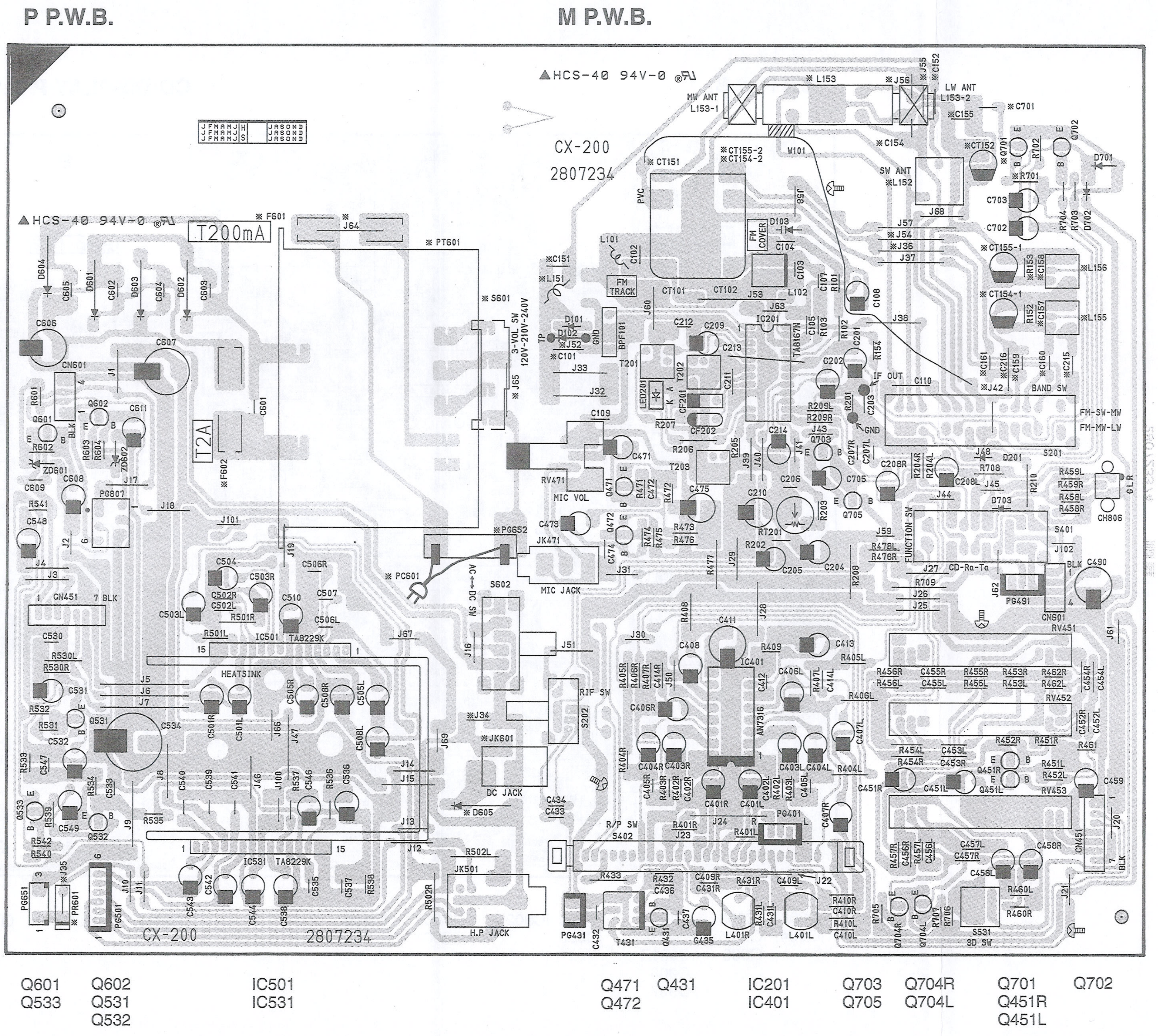

LASER DIODE
MONITOR DIODE
FOCUS
TRACK
ACTUATOR COIL
CN801
P8801
IC803 BA6294
IC804 BA6294
PRE. AMP.
IC801
SERVO
IC802
PHOTO SENSORS
TRACKING
FOCUS & EFM
DOOR SW
DISC MOTOR
SLIDE MOTOR
LIMIT SW
CN802
CN803
CN851
P851
FOCUS GAIN ADJ.
FOCUS OFFSET ADJ.
TER. BAL. ADJ.
TER GAIN ADJ.
PLL FREQ. ADJ.
UPD6376GS
IC902
IC901
DSP. SRAM. DF
8.4672MHz
X901
IC903
μ-COM
HD404818A06FS
4MHz
X902
LCD901
MEMORY
RANDOM
REPEAT
ZD901
HZ-3A-2
CN807
P8805
P8806
P8804
TP901
TP902
CD+5V
+9V
GND
SYNC
DR. GND
DR. 9V
R
L
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9

2SA844E: Q802. Q803. Q903~Q905. Q910. Q911. Q914. Q915. Q804
2SC458(C): Q901L/R. Q906~Q909. Q912. Q913
2SD1468S: Q902L/R
HIT5610C: Q801
HIT9014N-C: Q916
IN4531: D901~ D910. D801

PRINTED WIRING BOARD

FUSE RATING TABLE

	F601	F602
UC	-	2.5A 125V
E, EBS	-	T2A 250V
W, W(UN), W(AU)	T200mA	T2A 250V

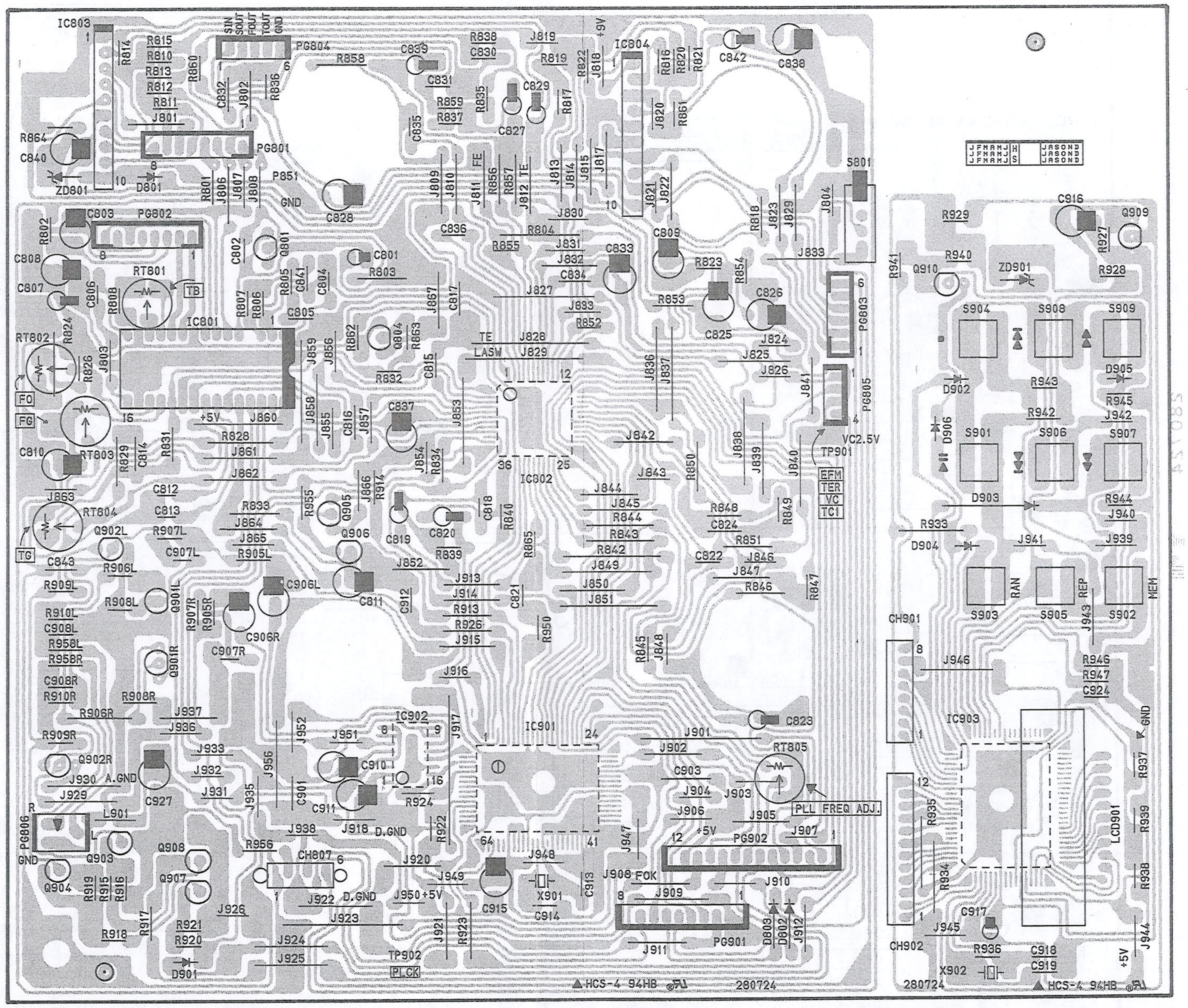

P P.W.B.
M P.W.B.
HCS-40 94V-0
CX-200
2807234
T200mA
T2A
MW ANT L153-1
LW ANT L153-2
SW ANT L152
FM TRACK
FM COVER
BAND SW
FM-SW-MW
FM-MW-LW
FUNCTION SW
MIC VOL
MIC JACK
DC JACK
H.P JACK
RIF SW
R/P SW
3D SW
3-VOL SW 120V-210V-240V
AC ↔ DC SW
HEATSINK
IC501 TA8229K
IC531 TA8229K
IC201 TA8167N
IC401 AN7316
CD-Ra-Ta
Q601
Q533
Q602
Q531
Q532
IC501
IC531
Q471
Q472
Q431
IC201
IC401
Q703
Q705
Q704R
Q704L
Q701
Q451R
Q451L
Q702
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9

PRINTED WIRING BOARD

A
B
C
D
E
F
G

CD P.W.B.

CD DISPLAY P.W.B.


IC803
IC801
IC802
IC804
IC901
IC902
IC903
PG801
PG802
PG804
PG805
PG806
PG901
PG902
PG903
CH807
CH901
CH902
RT801
RT802
RT803
RT804
RT805
S801
S901
S902
S903
S904
S905
S906
S907
S908
S909
LCD901
X901
X902
ZD801
ZD901
TP901
TP902
PLL FREQ ADJ.
A.GND
D.GND
+5V
GND
RAN
REP
MEM
▲HCS-4 94HB
280724

Q902R
Q904

IC803
Q902L
Q903

IC801
Q901L
Q901R
Q908
Q907

Q905
Q906

IC902

IC802
IC901

IC804

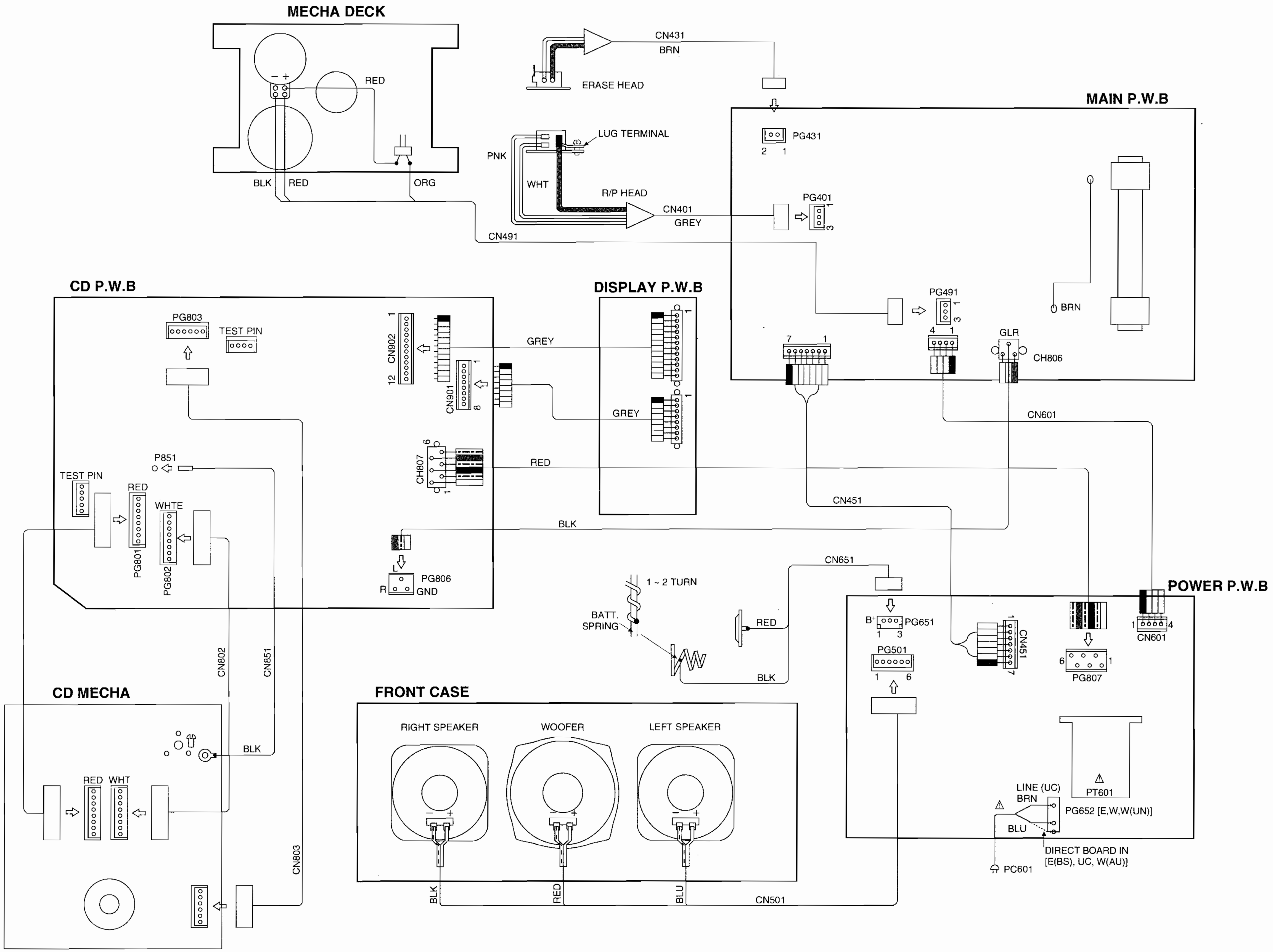
Q910

IC903

Q909

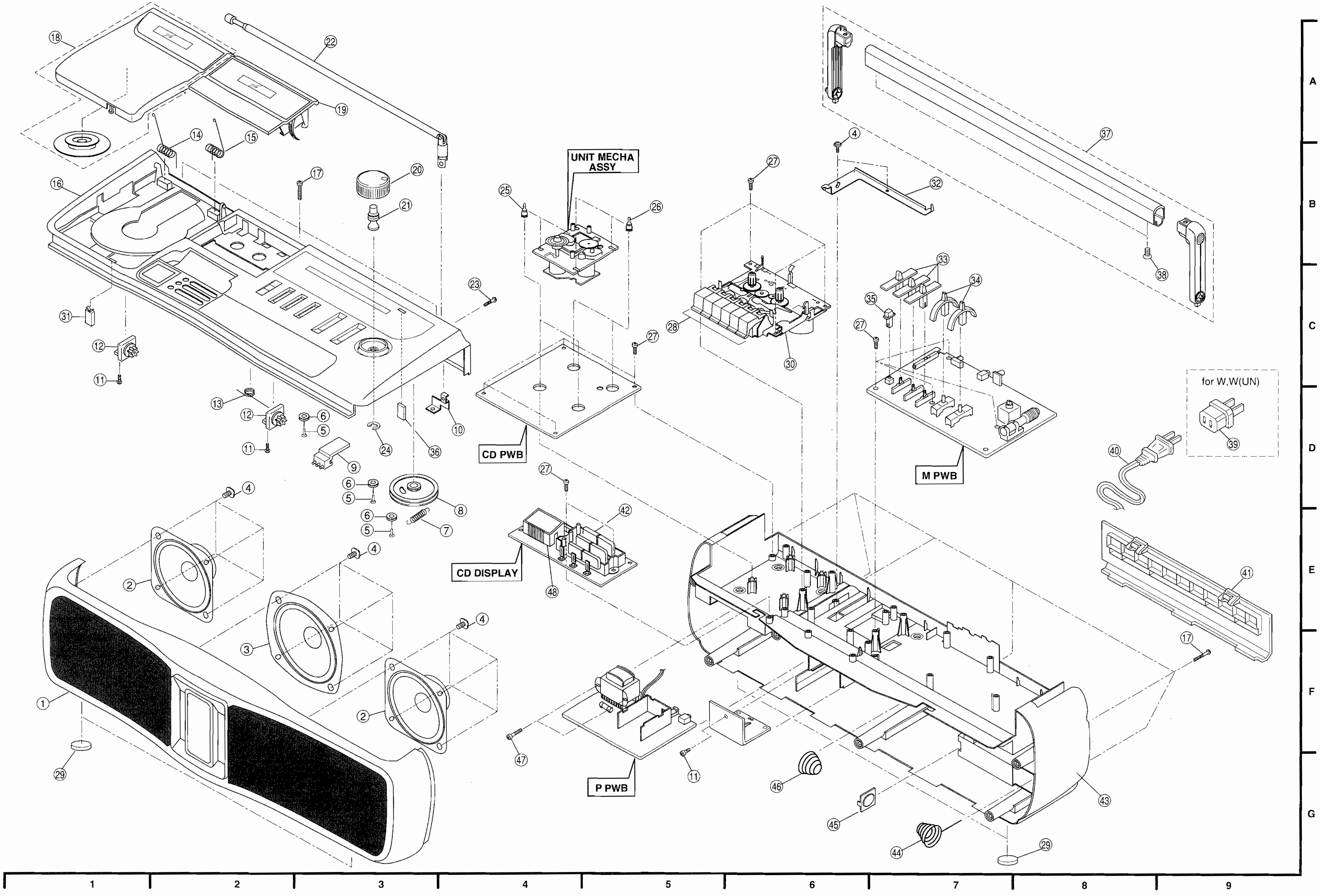
1 2 3 4 5 6 7 8 9

WIRING DIAGRAM


MECHA DECK
RED
BLK
RED
ORG
CN491
CN431
BRN
ERASE HEAD
PNK
WHT
LUG TERMINAL
R/P HEAD
CN401
GREY
MAIN P.W.B
PG431
2 1
PG401
1
3
PG491
1
3
BRN
7 1
4 1
GLR
CH806
CN601
CD P.W.B
PG803
TEST PIN
CN902
1
12
CN901
1
8
P851
TEST PIN
RED
WHTE
PG801
PG802
CH807
6
1
PG806
GND
L
R
GREY
GREY
RED
BLK
DISPLAY P.W.B
1
1
CN451
CN651
1 ~ 2 TURN
BATT. SPRING
RED
BLK
POWER P.W.B
B⁺
PG651
1 3
PG501
1 6
CN451
1
7
PG807
6 1
1 4
CN601
CN802
CN851
CD MECHA
BLK
RED WHT
CN803
FRONT CASE
RIGHT SPEAKER
WOOFER
LEFT SPEAKER
BLK
RED
BLU
CN501
LINE (UC)
BRN
BLU
PT601
PG652 [E,W,W(UN)]
DIRECT BOARD IN [E(BS), UC, W(AU)]
PC601

EXPLODED VIEW (Cabinet)

• Nos. are reference Nos. of parts list.


⑱
㉒
⑲
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⑪
⑬
⑫
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⑤
⑪
⑩
㉔
㊱
⑨
⑥
⑤
⑧
⑥
⑤
⑦
UNIT MECHA ASSY
㉕
㉖
CD PWB
㉗
㉘
㉚
㉗
㉗
㊷
CD DISPLAY
㊽
④
㉜
㉗
㊲
㊳
㉟
㉞
㉗
㊳
M PWB
for W,W(UN)
㊵
㊴
④
②
④
③
④
①
②
㉙
㊼
P PWB
⑪
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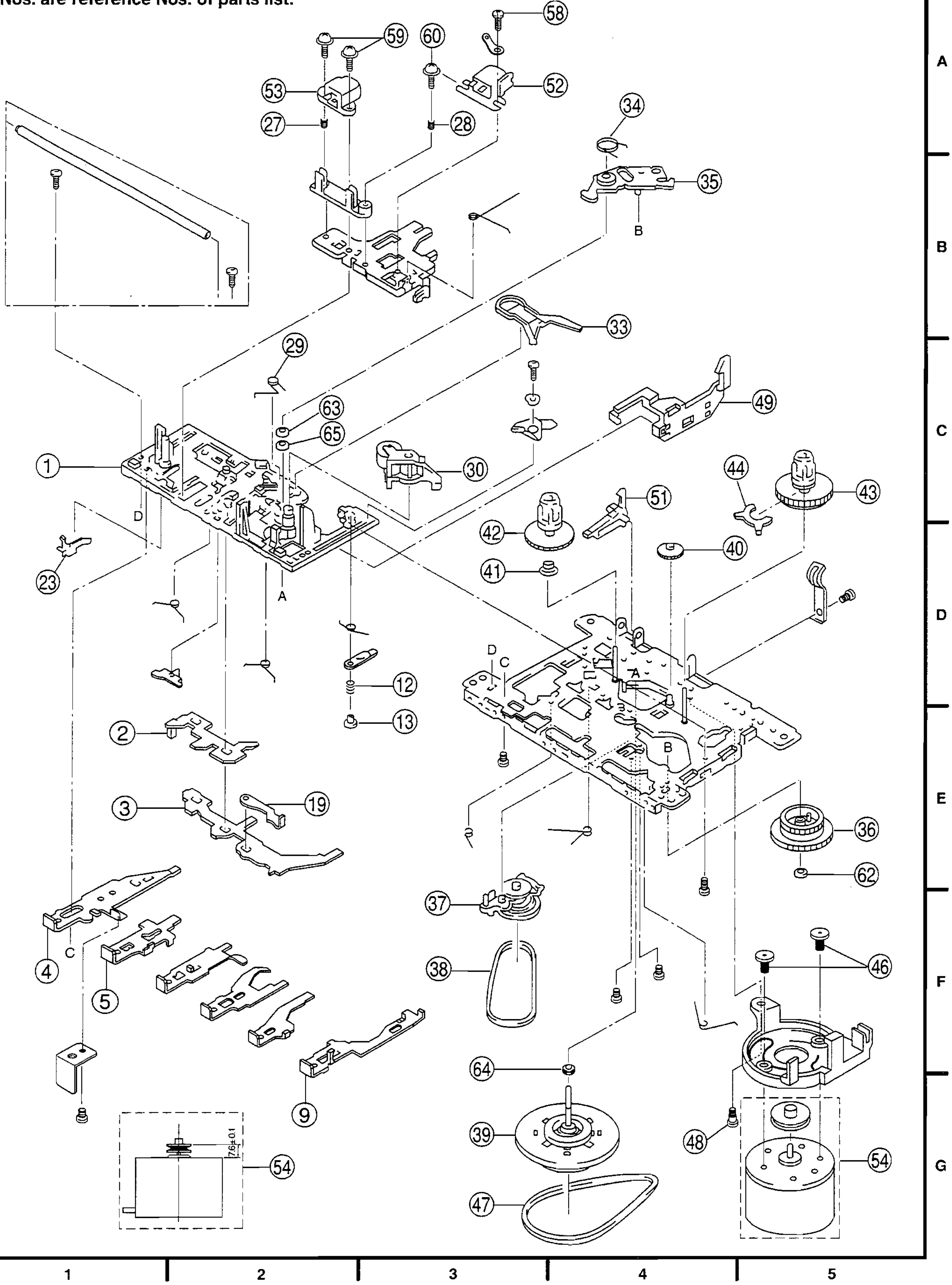
EXPLODED VIEW (Cassette Chassis TN-21ZSC-1313)

- Nos. are reference Nos. of parts list.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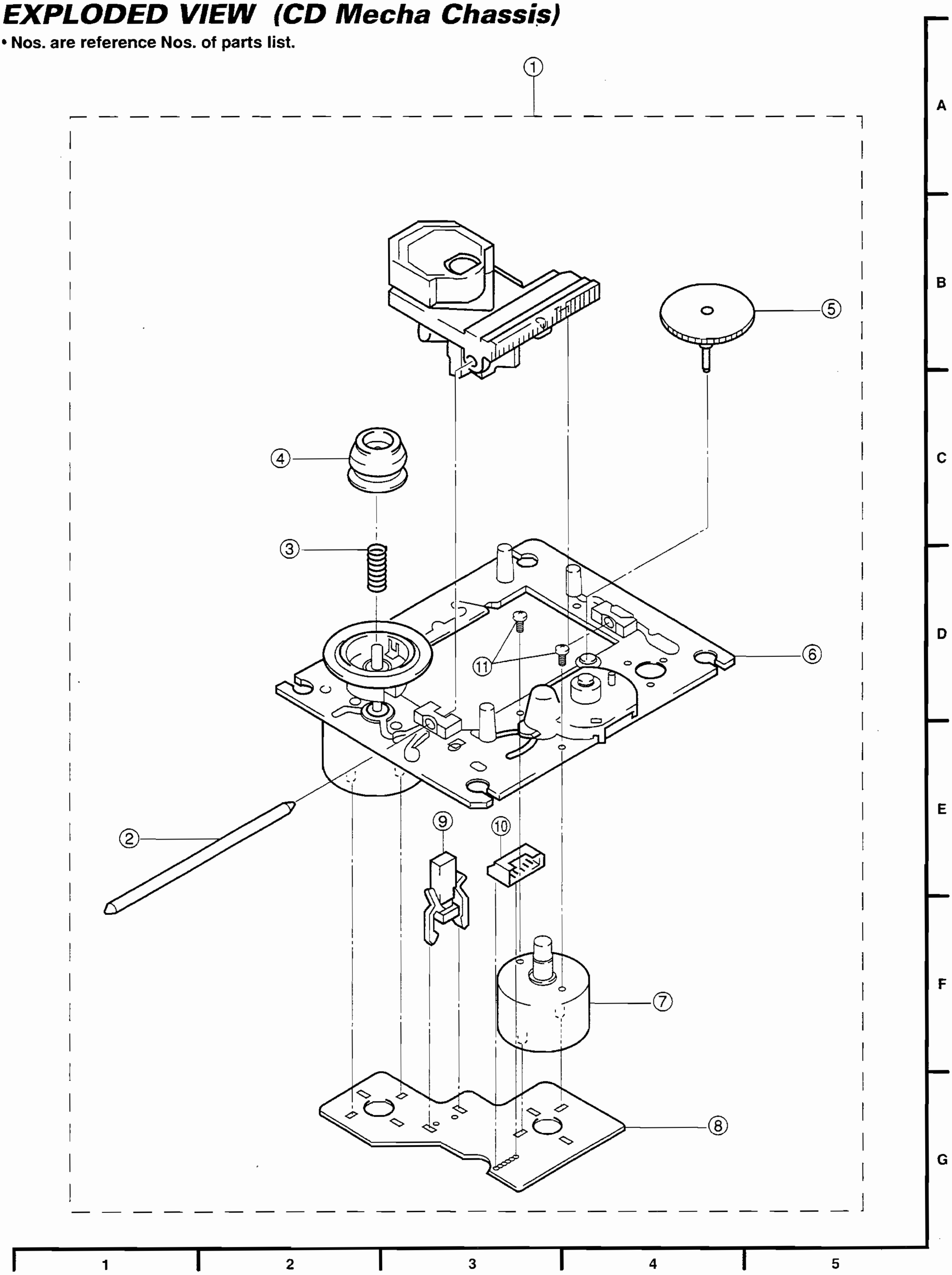
EXPLODED VIEW (CD Mecha Chassis)

- Nos. are reference Nos. of parts list.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REPLACEMENT PARTS LIST

PRODUCT SAFETY NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

ABBREVIATIONS		
	Capacitors	CC: Cylindrical ceramic, CD: Ceramic disk, PF:Polyester film, EL:Electrolytic, PP:Polypropylene.
	Resistors	CF:Carbon film, CC:Carbon composition, MF:Metal oxide film, VR:Variable resistor.
	Semiconductor.......	TR:Transistor, DI:Diode, ZD:Zener diode, VA:Varistor, TH:Thermistor, IC:IC.

SYMBOL NO.	PART NO.	DESCRIPTION
		CAPACITORS:
BPF101	2137193	FM BAND PASS FILTER
C101	0890012	CD 18PF ±5% 50V
		[except E,E(BS)]
C102	H230621	CD 24PF ±5% 50V
C103	0890118	CD 22PF ±5% 50V
C104	0890005	CD 4.7PF ±10% 50V
C105	0890043	CD 0.01μF ±20% 16V
C106	0890025	CD 180PF ±10% 50V
C107	0890121	CD 33PF ±5% 50V
C108	0890001	EL 0.47μF ±20% 50V
C109	0890019	CD 68PF ±5% 50V
C110	0890022	CD 100PF ±10% 50V
C151	H230609	CD 5.6PF ±5% 50V
		[except E,E(BS)]
C152	0276721	PF 0.22μF ±10% 50V
		[except E,E(BS)]
C154	0890005	CD 4.7PF ±10% 50V
		[for E,EBS]
C155	0890019	CD 68PF ±5% 50V
		[for E,EBS]
C155	0890005	CD 4.7PF ±10% 50V
		[except E,EBS]
C157	0890012	CD 18PF ±5% 50V
		[for E,EBS]
C158	0890009	CD 12PF ±5% 50V
		[for W,W(UN), W(AU)]
C158	0890007	CD 8.2PF ±5% 50V [for UC]
C159	0890075	CD 120PF ±5% 50V
		[for E,E(BS)]
C160	0262722	PP 360PF ±5% 100V
		[for E,E(BS)]
C160	H279337	PP 1500PF ±5% 100V
		[except E,E(BS)]
C161	H279343	PP 180PF ±5% 100V
		[for E,E(BS)]
C161	0262722	PP 360PF ±5% 100V
		[except E,E(BS)]
C201	0800003	EL 1.0μP ±20% 50V
C202	0800003	EL 1.0μF ±20% 50V
C203	0890035	CD 1000PF ±10% 50V
C204	0800003	EL 1.0μF ±20% 50V
C205	0253943	EL 0.33μF ±20% 50V
C206	0880031	PF 0.001μF ±10% 50V
C207L,R	H240216	CD 0.022μF ±10% 50V
C208L,R	0253942	EL 0.22μF ±20% 50V
C209	0800031	EL 33μF ±20% 10V

SYMBOL NO.	PART NO.	DESCRIPTION
C210	0800072	EL 470μF ±20% 6.3V
C211	0890044	CD 0.022μF $^{+80}_{-20}$ % 25V
C212	0890102	CD 0.022μF $^{+80}_{-20}$ % 50V
C213	0890021	CD 82PF ±5% 50V
C214	0890003	EL 1.0μF ±20% 50V
C215	0890022	CD 100P ±5% 50V
C216	0890019	CD 68P ±5% 50V
C401L,R	0800003	EL 1.0μF ±20% 50V
C402L,R	0800035	CD 1000PF ±10% 50V
C403L,R	0890022	EL 220μF ±20% 10V
C404L,R	0890003	EL 1.0μF ±20% 50V
C405L,R	0890101	CD 0.01μF ±10% 16V
C406L,R	0800001	EL 0.47μF ±20% 50V
C407L,R	0800001	EL 0.47μF ±20% 50V
C408	0800022	EL 22μF ±20% 10V
C409L,R	0890022	CD 100PF ±10% 50V
C410L,R	0800035	CD 1000PF ±10% 50V
C411	0800073	EL 470μF ±20% 10V
C412	0890103	CD 0.047μF $^{+80}_{-20}$ % 12.5V
C413	0800031	EL 33μF ±20% 10V
C414L,R	0890035	CD 1000μF ±10% 50V
C431L,R	0890026	CD 220PF ±10% 50V
C432	0262721	PP 18000PF ±5% 50V
C433	H240058	CD 5600PF ±20% 16V
C434	0890038	CD 3300PF ±20% 16V
C435	0800057	EL 220μF ±20% 10V
C436	0890041	CD 6800PF ±20% 16V
C437	H240214	CD 1500PF ±10% 25V
C451L,R	0800003	EL 1.0μF ±20% 50V
C452L,R	0890041	CD 6800PF ±20% 16V
C453L,R	0890044	CD 0.022μF $^{+80}_{-20}$ % 25V
C454L,R	0890035	CD 1000PF ±10% 50V
C455L,R	0890035	CD 1000PF ±10% 50V
C456L,R	0890041	CD 6800PF ±20% 16V
C457L,R	0890041	CD 6800PF ±20% 16V
C458L,R	0253941	EL 0.15μF ±20% 50V
C459	0800057	EL 220μF ±20% 10V
C471	0800003	EL 1.0μF ±20% 50V
C472	0890039	CD 4700PF ±20% 16V
C473	0800003	EL 1.0μF ±20% 50V
C474	0890044	CD 0.022μF $^{+80}_{-20}$ % 25V
C475	0800057	EL 220μF ±20% 10V
C490	0800074	EL 470μF ±20% 16V
C501L,R	0800003	EL 1.0μF ±20% 50V
C502L,R	0890038	CD 3300PF ±20% 16V
C503L,R	0800039	EL 47μF ±20% 10V
C504	0800039	EL 47μF ±20% 10V

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SYMBOL NO.	PART NO.	DESCRIPTION				SYMBOL NO.	PART NO.	DESCRIPTION			
C505L,R	0800048	EL	100µF	±20%	10V	C816	0890037	CD	2200PF	$^{+80}_{-20}$ %	50V
C506L,R	0880017	PF	0.15µF	±10%	50V	C817	0890043	CD	0.01µF	±20%	16V
C507	0880016	PF	0.1µF	±10%	50V	C818	H240218	CD	0.033µF	±10%	25V
C508L,R	0800073	EL	47µF	±20%	10V	C819	0800134	EL	33µF	±20%	10V
C510	0800041	EL	47µF	±20%	16V	C820	0800107	EL	0.47µF	±20%	50V
C530	H240224	CD	0.1µF	±10%	25V	C821	0890035	CD	0.01µF	±20%	16V
C531	0800003	EL	1.0µF	±20%	50V	C822	0890043	CD	0.01µF	±20%	16V
C532	0800003	EL	1.0µF	±20%	50V	C823	0800117	EL	4.7µF	±20%	25V
C533	H240224	CD	0.1µF	±10%	25V	C824	0890043	CD	0.01µF	±20%	16V
C534	0800087	EL	2200µF	±20%	16V	C825	0253940	EL	0.1µF	±20%	50V
C535	H240224	CD	0.1µF	±10%	25V	C826	0800016	EL	10µF	±20%	25V
C536	0800039	EL	47µF	±20%	10V	C827	0800107	EL	47µF	±20%	50V
C537	0276721	PF	0.22µF	±10%	50V	C828	0800001	EL	47µF	±20%	50V
C538	0800057	EL	220PF	±20%	10V	C829	0800107	EL	47µF	±20%	50V
C539	0880016	PF	0.1µF	±10%	50V	C830	0890043	CD	0.01µF	±20%	16V
C540	0880017	PF	0.15µF	±10%	50V	C831	0890043	CD	0.01µF	±20%	16V
C541	0880017	PF	0.15µF	±10%	50V	C832	0890043	CD	0.01µF	±20%	16V
C542	0800048	EL	100µF	±20%	10V	C833	0800009	EL	4.7µF	±20%	25V
C543	0800048	EL	100µF	±20%	10V	C834	0240224	CD	0.1µF	±10%	25V
C544	0800058	EL	220µF	±20%	16V	C835	H240218	CD	0.033µF	±10%	25V
C546	0800039	EL	47µF	±20%	25V	C836	H240068	CD	0.1µF	$^{+80}_{-20}$ %	50V
C547	H240224	CD	0.1µF	±10%	25V	C837	0800144	EL	100µF	±20%	10V
C548	0800048	EL	100µF	±20%	10V	C838	0800073	EL	470µF	±20%	10V
C549	0800003	EL	1.0µF	±20%	50V	C839	0800107	EL	0.47µF	±20%	50V
C601	0890102	CD	0.022µF	$^{+80}_{-20}$ %	50V	C840	0800057	EL	220µF	±20%	10V
C602	0890102	CD	0.022µF	$^{+80}_{-20}$ %	50V	C841	0890001	CD	1PF	±5%	50V
C603	0890102	CD	0.022µF	$^{+80}_{-20}$ %	50V	C842	0800103	EL	0.220µF	±20%	50V
C604	0890102	CD	0.022µF	$^{+80}_{-20}$ %	50V	C843	0800043	CD	0.01µF	±20%	16V
C605	0890102	CD	0.022µF	$^{+80}_{-20}$ %	50V	C901	0800043	CD	0.01µF	±20%	16V
C606	0800087	EL	2200µF	±20%	16V	C903	0890043	CD	0.01µF	±20%	16V
C607	0800087	EL	2200µF	±20%	16V	C906L	0800005	EL	2.2µF	±20%	50V
C608	0800048	EL	100µF	±20%	10V	C906R	0800005	EL	2.2µF	±20%	50V
C609	0890102	CD	0.022µF	$^{+80}_{-20}$ %	50V	C907L	H240222	CD	0.068µF	±10%	50V
C611	0800048	EL	100µF	±20%	10V	C907R	H240222	CD	0.068µF	±10%	50V
C701	0890035	CD	1000PF	±10%	50V	C908L	0890031	CD	470PF	±10%	50V
		[for E,E(BS)]				C908R	0890031	CD	470PF	±10%	50V
C702	0800009	EL	4.7µF	±20%	25V	C910	0800048	EL	100µF	±20%	10V
C703	0800009	EL	4.7µF	±20%	25V	C911	0800048	EL	100µF	±20%	10V
C801	0252864	EL	100µF	±20%	10V	C912	0800043	CD	0.01µF	±20%	16V
C802	0890043	CD	0.01µF	±20%	16V	C913	0890013	CD	22PF	±5%	50V
C803	0800031	EL	33µF	±20%	10V	C914	0890013	CD	22PF	±5%	50V
C804	0890101	CD	0.01µF	±10%	50V	C915	0800048	EL	100µF	±20%	10V
C805	0890014	CD	27PF	±5%	50V	C916	0800048	EL	100µF	±20%	10V
C806	H240215	CD	0.018µF	±10%	25V	C917	0800144	EL	100µF	±20%	10V
C807	0252263	EL	33µF	±20%	10V	C918	0890015	CD	33PF	±5%	50V
C808	0800031	EL	33µF	±20%	10V	C919	0890015	CD	33PF	±5%	50V
C809	0800003	EL	1.0µF	±20%	50V	C924	0800043	CD	0.01µF	±20%	16V
C810	0800048	EL	100µF	±20%	10V	C927	0800048	EL	100µF	±20%	10V
C811	0800001	EL	0.47µF	±20%	50V						
C812	0890101	CD	0.01µF	±10%	50V	**RESISTORS:**					
C813	0890101	CD	0.01µF	±10%	50V	R101	0700067	CF	100KΩ	±5%	1/16W
C814	0890037	CD	2200PF	$^{+80}_{-20}$ %	50V	R102	0700067	CF	100KΩ	±5%	1/16W
C815	0890039	CD	4700PF	±10%	50V	R103	0700018	CF	22Ω	±5%	1/16W

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SYMBOL NO.	PART NO.	DESCRIPTION
R152	0700053	CF 8.2KΩ ±5% 1/16W
R153	0700054	CF 10KΩ ±5% 1/16W [except E,E(BS)]
R154	0700027	CF 100Ω ±5% 1/16W
R201	0700067	CF 100KΩ ±5% 1/16W
R202	0700041	CF 1KΩ ±5% 1/16W
R203	0700055	CF 12KΩ ±5% 1/16W
R204L,R	0700052	CF 6.8KΩ ±5% 1/16W
R205	0700051	CF 5.6KΩ ±5% 1/16W
R206	0700031	CF 180Ω ±5% 1/16W
R207	0700027	CF 100Ω ±5% 1/16W
R208	H129549	CF 56Ω ±5% 1/4W
R209L,R	0700045	CF 2.2KΩ ±5% 1/16W (for E,EBS)
R209L,R	0700049	CF 4.7KΩ ±5% 1/16W [for UC,W,W(UN),W(AU)]
R210	0700054	CF 10KΩ ±5% 1/16W
R410L,R	0700067	CF 100KΩ ±5% 1/16W
R402L,R	0700026	CF 82Ω ±5% 1/16W
R403L,R	0700055	CF 12KΩ ±5% 1/16W
R404L,R	0700047	CF 3.3KΩ ±5% 1/16W
R405L,R	0700052	CF 6.8KΩ ±5% 1/16W
R406L,R	0700058	CF 22KΩ ±5% 1/16W
R407L,R	0700049	CF 4.7KΩ ±5% 1/16W
R408	H129551	CF 68Ω ±5% 1/4W
R409	H113695	CF 2.2MΩ ±5% 1/16W
R410L,R	0700056	CF 15KΩ ±5% 1/16W
R431L,R	0700066	CF 82KΩ ±5% 1/16W
R432	0700054	CF 10KΩ ±5% 1/16W
R433	H129547	CF 47Ω ±5% 1/4W
R451L,R	0700049	CF 4.7KΩ ±5% 1/16W
R452L,R	0700079	CF 820KΩ ±5% 1/16W
R453L,R	0700061	CF 33KΩ ±5% 1/16W
R454L,R	0700061	CF 33KΩ ±5% 1/16W
R455L,R	0700049	CF 4.7KΩ ±5% 1/16W
R456L,R	0700049	CF 4.7KΩ ±5% 1/16W
R457L,R	0700054	CF 10KΩ ±5% 1/16W
R458L,R	0700046	CF 2.7KΩ ±5% 1/16W
R459L,R	0700054	CF 10KΩ ±5% 1/16W
R460L,R	0700045	CF 2.2KΩ ±5% 1/16W
R461	0700034	CF 330Ω ±5% 1/16W
R462L,R	0700061	CF 33KΩ ±5% 1/16W
R471	0700076	CF 470KΩ ±5% 1/16W
R472	0700027	CF 100Ω ±5% 1/16W
R473	0700054	CF 10KΩ ±5% 1/16W
R474	0700076	CF 470KΩ ±5% 1/16W
R475	0700029	CF 150Ω ±5% 1/16W
R476	0700045	CF 2.2KΩ ±5% 1/16W
R477	H129571	CF 4.7KΩ ±5% 1/4W
R478L,R	0700063	CF 47KΩ ±5% 1/16W
R501L,R	0700026	CF 82Ω ±5% 1/16W
R502L,R	H113227	CF 68Ω ±5% 1/2W
R530L,R	0700063	CF 47KΩ ±5% 1/16W
R531	0700076	CF 470KΩ ±5% 1/16W
R532	0700054	CF 10KΩ ±5% 1/16W
R533	0700067	CF 100KΩ ±5% 1/16W
R534	0700054	CF 10KΩ ±5% 1/16W
R535	0700056	CF 15KΩ ±5% 1/16W
R536	0700026	CF 82Ω ±5% 1/16W
R537	0700026	CF 82Ω ±5% 1/16W
R538	0700045	CF 2.2KΩ ±5% 1/16W
R539	0700041	CF 1KΩ ±5% 1/16W
R540	0700067	CF 100KΩ ±5% 1/16W
R541	0700041	CF 1KΩ ±5% 1/16W
R542	0700061	CF 33KΩ ±5% 1/16W
R601	0700032	CF 220Ω ±5% 1/16W
R602	0700027	CF 100Ω ±5% 1/16W
R603	0700036	CF 470Ω ±5% 1/16W
R604	0700027	CF 100Ω ±5% 1/16W
R701	0700063	CF 47KΩ ±5% 1/16W [for E,E(BS)]
R702	0700054	CF 10KΩ ±5% 1/16W
R703	0700054	CF 10KΩ ±5% 1/16W
R704	0700052	CF 6.8KΩ ±5% 1/16W
R705	0700054	CF 10KΩ ±5% 1/16W
R706	0700063	CF 47KΩ ±5% 1/16W
R707	0700054	CF 10KΩ ±5% 1/16W
R708	0700052	CF 6.8KΩ ±5% 1/16W
R709	0700041	CF 1KΩ ±5% 1/16W
R801	0700027	CF 100Ω ±5% 1/16W
R802	0700041	CF 1KΩ ±5% 1/16W
R803	H113221	CF 22Ω ±5% 1/2W
R804	0700041	CF 1KΩ ±5% 1/16W
R805	0700046	CF 2.7KΩ ±5% 1/16W
R806	0700058	CF 22KΩ ±5% 1/16W
R807	0700051	CF 5.6KΩ ±5% 1/16W
R808	0700054	CF 10KΩ ±5% 1/16W
R810	0700056	CF 15KΩ ±5% 1/16W
R811	0700056	CF 15KΩ ±5% 1/16W
R812	0700056	CF 15KΩ ±5% 1/16W
R813	0700054	CF 10KΩ ±5% 1/16W
R814	0700056	CF 15KΩ ±5% 1/16W
R815	0700054	CF 10KΩ ±5% 1/16W
R816	0700056	CF 15KΩ ±5% 1/16W
R817	0700056	CF 15KΩ ±5% 1/16W
R818	0700056	CF 15KΩ ±5% 1/16W
R819	0700054	CF 10KΩ ±5% 1/16W
R820	0700061	CF 33KΩ ±5% 1/16W
R821	0700058	CF 22KΩ ±5% 1/16W
R822	0700054	CF 10KΩ ±5% 1/16W
R823	0700056	CF 15KΩ ±5% 1/16W
R824	0700056	CF 15KΩ ±5% 1/16W
R826	0700056	CF 15KΩ ±5% 1/16W
R828	0700054	CF 10KΩ ±5% 1/16W
R829	0700058	CF 22KΩ ±5% 1/16W
R831	0700051	CF 5.6KΩ ±5% 1/16W

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SYMBOL NO.	PART NO.	DESCRIPTION
R832	0700041	CF 1KΩ ±5% 1/16W
R833	0700054	CF 10KΩ ±5% 1/16W
R834	0700067	CF 100KΩ ±5% 1/16W
R835	0700054	CF 10KΩ ±5% 1/16W
R836	0700054	CF 10KΩ ±5% 1/16W
R837	0700054	CF 10KΩ ±5% 1/16W
R838	0700058	CF 22KΩ ±5% 1/16W
R839	0700081	CF 1MΩ ±5% 1/16W
R840	0700058	CF 22KΩ ±5% 1/16W
R842	0700043	CF 1.5KΩ ±5% 1/16W [for W,W(UN),W(AU)]
R842	0700046	CF 2.7KΩ ±5% 1/16W [for UC,E,E(BS)]
R843	0700069	CF 150KΩ ±5% 1/16W
R844	0700052	CF 6.8KΩ ±5% 1/16W
R845	0700041	CF 1KΩ ±5% 1/16W
R846	0700061	CF 33KΩ ±5% 1/16W
R847	0700061	CF 33KΩ ±5% 1/16W
R848	0700076	CF 470KΩ ±5% 1/16W
R849	0700062	CF 39KΩ ±5% 1/16W
R850	0700064	CF 56KΩ ±5% 1/16W
R851	0700048	CF 3.9KΩ ±5% 1/16W
R852	0700065	CF 68KΩ ±5% 1/16W
R853	0700072	CF 220KΩ ±5% 1/16W
R854	0700062	CF 39KΩ ±5% 1/16W
R855	0700065	CF 68KΩ ±5% 1/16W
R856	0700065	CF 68KΩ ±5% 1/16W
R857	0700065	CF 68KΩ ±5% 1/16W
R858	0700037	CF 560Ω ±5% 1/16W
R859	0700058	CF 22KΩ ±5% 1/16W
R860	0700058	CF 22KΩ ±5% 1/16W
R861	0700014	CF 10Ω ±5% 1/16W
R862	0700054	CF 10KΩ ±5% 1/16W
R863	0700072	CF 220KΩ ±5% 1/16W
R864	0700041	CF 1KΩ ±5% 1/16W
R865	0700045	CF 2.2KΩ ±5% 1/16W
R905L	0700037	CF 560Ω ±5% 1/16W
R905R	0700037	CF 560Ω ±5% 1/16W
R906L	0700049	CF 4.7KΩ ±5% 1/16W
R906R	0700049	CF 4.7KΩ ±5% 1/16W
R907L	0700032	CF 220Ω ±5% 1/16W
R907R	0700032	CF 220Ω ±5% 1/16W
R908L	0700081	CF 1MΩ ±5% 1/16W
R908R	0700081	CF 1MΩ ±5% 1/16W
R909L	0700049	CF 4.7KΩ ±5% 1/16W
R909R	0700049	CF 4.7KΩ ±5% 1/16W
R910L	0700067	CF 100KΩ ±5% 1/16W
R910R	0700067	CF 100KΩ ±5% 1/16W
R913	0700054	CF 10KΩ ±5% 1/16W
R914	0700054	CF 10KΩ ±5% 1/16W
R915	0700058	CF 22KΩ ±5% 1/16W
R916	0700058	CF 22KΩ ±5% 1/16W
R917	0700063	CF 47KΩ ±5% 1/16W

SYMBOL NO.	PART NO.	DESCRIPTION
R918	0700058	CF 22KΩ ±5% 1/16W
R919	0700058	CF 22KΩ ±5% 1/16W
R920	0700058	CF 22KΩ ±5% 1/16W
R921	0700058	CF 22KΩ ±5% 1/16W
R922	0700054	CF 10KΩ ±5% 1/16W
R923	0700041	CF 1KΩ ±5% 1/16W
R924	0700041	CF 1KΩ ±5% 1/16W
R926	0700054	CF 10KΩ ±5% 1/16W
R927	0700041	CF 1KΩ ±5% 1/16W
R928	0700041	CF 1KΩ ±5% 1/16W
R929	0700054	CF 10KΩ ±5% 1/16W
R933	0700051	CF 5.6KΩ ±5% 1/16W
R934	0700054	CF 10KΩ ±5% 1/16W
R935	0700063	CF 47KΩ ±5% 1/16W
R936	0700081	CF 1MΩ ±5% 1/16W
R937	0700054	CF 10KΩ ±5% 1/16W
R938	0700054	CF 10KΩ ±5% 1/16W
R939	0700054	CF 10KΩ ±5% 1/16W
R940	0700054	CF 10KΩ ±5% 1/16W
R941	0700054	CF 10KΩ ±5% 1/16W
R942	0700063	CF 47KΩ ±5% 1/16W
R943	0700063	CF 47KΩ ±5% 1/16W
R944	0700063	CF 47KΩ ±5% 1/16W
R945	0700063	CF 47KΩ ±5% 1/16W
R946	0700054	CF 10KΩ ±5% 1/16W
R947	0700054	CF 10KΩ ±5% 1/16W
R950	0700067	CF 100KΩ ±5% 1/16W
		ICS:
IC201	2385323	IC TA8167N
IC401	2020091	IC AN7316
IC501	2020101	IC TA8229K
IC531	2020101	IC TA8229K
IC801	23019212	IC CXA1081S [or KA9201N]
IC802	2010581	IC CXA1082BQ [or KA8309B]
IC803	2003701	IC BA6294
IC804	2003701	IC BA6294
IC901	2018321	IC CXD1167Q [or KS9210]
IC902	2015281	IC µPD6376GX
IC903	2011511	IC HD404818A06FS
		TRANSISTORS:
Q431	2317782	TRS 2SC2235Y
Q451L,R	2318303	TRS 2SC1740S
Q471	2319091	TRS HIT9014NC
Q472	2319091	TRS HIT9014NC
Q531	2319091	TRS HIT9014NC
Q532	2319052	TRS HIT8050C
Q533	2318292	TRS 2SA933S
Q601	2319052	TRS HIT8050C
Q602	2319062	TRS HIT5609C
Q701	2319071	TRS HIT9016G [for E,E(BS)]
Q702	2318303	TRS 2SC1740S

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SYMBOL NO.	PART NO.	DESCRIPTION
Q703	2318303	TRS 2SC1740S
Q703	2318303	TRS 2SC1740S
Q704	2318303	TRS 2SC1740S
Q801	2319152	TRS HIT5610C
Q804	2318292	TRS 2SA933R
Q901L	2318303	TRS 2SC1740S
Q901R	2318303	TRS 2SC1740S
Q902L	2315422	TRS 2SD1468R
Q902R	2315422	TRS 1468STDTPR
Q903	2318292	TRS 2SA933R
Q904	2318292	TRS 2SA933R
Q905	2318292	TRS 2SA933R
Q906	2318303	TRS 2SC1740S
Q907	2318303	TRS 2SC1740S
Q908	2318303	TRS 2SC1740S
Q909	2318303	TRS 2SC1740S
Q910	2318292	TRS 2SA933R
		DIODES:
D101	2398921	DI 1N4531
D102	2398921	DI 1N4531
D103	23380312	DI 1S2790
D202	2398921	DI 1N4531
D201	2398921	DI 1N4531
LED201	2397311	LED TLR208
D601	2398823	DI RL253
ZD601	2331807	DI HZ6-C1
D602	2398823	DI RL253
ZD602	2331805	DI HZ6-B2
D603	2398823	DI RL253
D604	2398823	DI RL253
D605	2398824	DI RL253 [for W,W(UN),W(AU)]
D701	2398921	DI 1N4531
D702	2398921	DI 1N4531
D703	2398921	DI 1N4531
D801	2398921	DI 1N4531
ZD801	23376122	DI HZ3-A2
D802	2398921	DI 1N4531
D803	2398921	DI 1N4531
D901	2398921	DI 1N4531
D902	2398921	DI 1N4531
D903	2398921	DI 1N4531
D904	2398921	DI 1N4531
D905	2398921	DI 1N4531
D906	2398921	DI 1N4531
ZD901	23376122	DI HZ3-A2
		VARIABLE CAPACITOR:
PVC	0282406	VARIABLE CAPACITOR
CT152	0281476	TRIMMER [for E,E(BS)]
CT154	0281474	TRIMMER [except E,E(BS)]
CT155	0281476	TRIMMER [for E,E(BS)]

SYMBOL NO.	PART NO.	DESCRIPTION
		VARIABLE RESISTORS:
RT201	0160322	SEMI-VR 10KΩ
RV451	0167398	VR 100KΩ
RV452	0167398	VR 100KΩ
RV453	0167396	VR 20KΩ
RV471	0157811	VR 10KΩ
RT801	0160324	SEMI-VR 20KΩ
RT802	0160322	SEMI-VR 10KΩ
RT803	0160324	SEMI-VR 20KΩ
RT804	0160324	SEMI-VR 20KΩ
RT805	0160326	SEMI-VR 3.0KΩ
		TRANSFORMERS:
T201	2137875	FM IF TRANSFORMER
T202	2137877	AM IF TRANSFORMER
T203	2137876	FM IF TRANSFORMER
T431	2275441	REC BIAS OSC TRANS
		FUSES:
⚠F601	2727720	FUSE (T200mA) [for W,W(UN),W(AU)]
⚠F602	2728076	FUSE (T2A) [except UC]
⚠F602	2722415	FUSE UL 2.5A [for UC]
		COILS:
L101	2137689	FM RF COIL
L102	2138083	FM OSC COIL
L151	2137684	CHOCK COIL (0.45μH) [except E,E(BS)]
L152	2137826	SW ANT COIL [except E,E(BS)]
L153	2759327	FERRITE ANTENNA [for E,E(BS)]
L153	2758229	FERRITE ANTENNA [except E,E(BS)]
L155	2137873	MW OSC COIL [for E,EBS]
L155	2137638	SW OSC COIL [except E,EBS]
L156	2137874	LW OSC COIL [for E,EBS]
L156	2137873	MW OSC COIL [except E,EBS]
L401L,R	2228613	CHOKE COIL (33mH)
L901	2227922	22 μH COIL
		MISCELLANEOUS:
CF201	2155491	CERAMIC FILTER [for E,E(BS)]
CF201	2155492	CERAMIC FILTER [except E,E(BS)]
CF202	2135321	CERAMIC FILTER
LCD901	2481282	LCD
S201	2629366	LEVER SWITCH
S202	2622523	SLIDE SWITCH
S401	2629365	LEVER SWITCH
S402	2628826	SLIDE SWITCH
S531	2600832	PUSH SWITCH
⚠S601	2611312	SWITCH [for W,W(UN),W(AU)]
S602	2629262	SLIDE SWITCH
S801	2639154	PUSH SWITCH
S901	2634341	TACT SWITCH
S902	2634341	TACT SWITCH
S903	2634341	TACT SWITCH

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SYMBOL NO.	PART NO.	DESCRIPTION
S904	2634341	TACT SWITCH
S905	2634341	TACT SWITCH
S906	2634341	TACT SWITCH
S907	2634341	TACT SWITCH
S908	2634341	TACT SWITCH
S909	2634341	TACT SWITCH
X901	2789821	CRYSTAL (8.4672 MHz)
X902	2155321	CERAMIC OSC
JK471	2672711	MIC JACK
JK501	2678761	HEADPHONE JACK
JK601	2678282	DC JACK [for W,W(UN),W(AU)]
⚠PT601	2216081	POWER TRANSFORMER [for UC]
⚠PT601	2216085	POWER TRANSFORMER [for E,E(BS)]
⚠PT601	2216084	POWER TRANSFORMER [for W,W(UN),W(AU)]
⚠PR601	2726201	IC PROTECTOR (2.7A) [for UC]
⚠PR602	2726221	IC PROTECTOR (0.25A)
		CABINET CHASSIS:
1	4899311	FRONT CASE ASSY [for UC]
	4899312	FRONT CASE ASSY [for E]
	4899313	FRONT CASE ASSY [for E(BS)]
	4899314	FRONT CASE ASSY [for W]
	4899315	FRONT CASE ASSY [for W(UN)]
	4899316	FRONT CASE ASSY [for W(AU)]
2	2403697	SPEAKER 10
3	2403848	SPEAKER 12
4	4578972	BT FLANGE SCREW (3øX10)
5	4577661	ROLLER PIN
6	3934271	8 ROLLER
7	3340321	SPRING M
8	3348704	PULLEY
9	3831311	POINTER
10	4476661	ANT TERMINAL
11	8691410	3 X 10 BT SCREW
12	3815801	DAMPER ASSY
13	3335551	EJECT SPRING
14	3335571	CD OPEN SPRING L
15	3335581	CD OPEN SPRING R
16	4899331	TOP PANEL ASSY [for UC]
	4899332	TOP PANEL ASSY [for E]
	4899333	TOP PANEL ASSY [for E(BS)]
	4899334	TOP PANEL ASSY [for W]
	4899335	TOP PANEL ASSY [for W(UN)]
	4899336	TOP PANEL ASSY [for W(AU)]
17	4577816	BT SCREW (3øX20)
18	4899361	CD LID ASSY
19	4899371	CASSETTE LID ASSY
20	3273561	38 KNOB
21	4503931	TUNING SHAFT
22	2757904	ROD ANTENNA
23	4567433	DT SCREW (3øX10)
24	4418013	4E RING

SYMBOL NO.	PART NO.	DESCRIPTION
25	4624321	FLOAT RUBBER A
26	4624331	FLOAT RUBBER B
27	8699410	3 X 10 BT SCREW
28	3273591	CASSETTE BUTTON
29	3857823	SPACER A
30	3375421	CASSETTE MECHA
31	3875771	PUSH LOCK
32	4491531	REC LEVER
33	3273541	SLIDE KNOB
34	3272691	LEVEL KNOB
35	3273531	3D BUTTON
36	3812171	STEREO INDICATOR
37	4006738	HANDLE ASSY
38	4577832	BT FLAT HEAD SCREW (3øx10)
39	26679222	SIEMENS PLUG [for W,W(UN)]
40	2706584	POWER CORD [for W,W(UN)]
	2972565	POWER CORD [for E]
	2713144	POWER CORD [for UC]
	2971111	POWER CORD [for W(AU)]
	2972572	POWER CORD [for E(BS)]
41	3821193	BATTERY LID
42	3273521	CD BUTTON
43	4899351	REAR CASE ASSY [for UC]
	4899352	REAR CASE ASSY [for E]
	4899353	REAR CASE ASSY [for E(BS)]
	4899354	REAR CASE ASSY [for W]
	4899355	REAR CASE ASSY [for W(UN)]
	4899356	REAR CASE ASSY [for W(AU)]
44	3369782	BATTERY SPRING
45	4436666	TERMINAL
46	3369849	CP SPRING
47	4578976	BT SCREW (3øx20)
48	3873981	LCD HOLDER
		CASSETTE CHASSIS
1	8513391	BASE ASSY
2	8513392	SWITCH ACTUATOR
3	8513393	PUSH BUTTON ACTUATOR
4	8513394	REC BUTTON LEVER
5	8513395	PLAY BUTTON LEVER
9	8513399	PAUSE BUTTON LEVER
12	8513402	PAUSE LEVER SPRING
13	8513403	PAUSE STOPPER
19	8513408	E KICK LEVER
23	4856331	LEAF SWITCH MSW-1541T
27	48195292	EH SPRING
28	48190172	AZIMUTH SPRING
29	3375182	M CONTROL SPRING
30	3375181	RINCH ROLLER ARM ASSY
33	3863471	SENSING LEVER
34	8513427	GEAR PLATE SPRING
35	8513428	GEAR PLATE ASSY
36	8513429	CAM GEAR

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SYMBOL NO.	PART NO.	DESCRIPTION	SYMBOL NO.	PART NO.	DESCRIPTION
37	3375571	RF CLUTCH ASSY			
38	8513379	RF BELT			
39	8513425	FLYWHEEL ASSY			
40	4839379	FF GEAR			
41	8513381	BACK TENSION SPRING			
42	8513431	SUPPLY REEL ASSY			
43	8513432	TAKE UP REEL ASSY			
44	3374466	SENSOR			
46	3374505	MOTOR COLLER SCREW			
47	3374507	MAIN BELT			
48	3374508	MB SCREW			
49	8513438	EJECT SLIDE LEVER			
51	4832421	RECORD SAFETY LEVER			
52	8513383	R.P. HEAD MS15R-AA2N1			
53	8513384	E HEAD LE15B-C1			
54	3375573	MOTOR ASSY			
58	8513430	⊕ BIND SCREW M2x3			
59	3374543	⊕⊖ CAP SCREW M2x7.5			
60	48196002	AZIMUTH SCREW M2x7			
62	8513441	P WASHER CUT 12x3.8x0.3			
63	8513447	HL WASHER CUT 1.45x3.2x0.5			
64	3375187	P WASHER 2x3.5x0.4			
65	3375188	P WASHER 2.1x4x0.13			
		UNIT MECHA			
1	3372401	UNIT MECHA ASSY			
2	3378771	GUIDE SHAFT			
3	3378772	COMPRESSION SPRING			
4	3378773	CENTER RING			
5	3378775	GEAR			
6	3378776	CD CHASSIS ASSY (WITH DISK MOTOR)			
7	3378777	SLIDE MOTOR ASSY			
8	3378778	PC BOARD			
9	3378779	LEAF SWITCH			
10	3378781	6P PLUG			
11	8711103	PAN HEAD SCREW (2x3)			

HITACHI

CX-200 YS No. 0008E
[UC, E, E(BS),W, W(UN), W(AU)]

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